A Profile of NWT Seniors

Northwest Territories Health and Social Services
May 2003

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Minister's Message

A Profile of NWT Seniors fulfills a commitment in the Seniors Action Plan, which was released in June 2002.

The baseline information in this report indicates seniors are the fastest growing segment of the population in the NWT and their numbers are expected to more than double by 2020. Life expectancy of NWT seniors is on a par with their national counterparts and they are more likely than their peers to be in the labor force.

However, it also shows that NWT seniors are less physically active and more likely to smoke than Canadian seniors. Such negative health practices are not only linked to chronic conditions such as heart disease, diabetes, respiratory diseases and lung cancer, but also prevent our elderly population from reaching optimum health.

The profile helps the GNWT to develop programs and services that meet the needs of seniors today so that they can make healthier choices to enhance their quality of life now and in the future.

I welcome comments from all NWT seniors and residents.

J. Michael Miltenberger
Minister of Health and Social Services

Executive Summary

This report fulfills a commitment made in the *Seniors' Action Plan 2002-2003* to research issues facing seniors. It is also the first comprehensive report to profile NWT seniors from a population health perspective. This profile provides a base of useful information in the development and prioritization of programs to better serve the needs of seniors.

The report looks at health as more than the absence of disease - health is a complete state of physical, mental, social and emotional well-being. As such, a large number of indicators are examined and organized as follows:

Part A Determinants of Health and Well-Being
- Demographics
- Socio-economics
- Socio-cultural Characteristics
- Personal Health Practices

Part B Health Status and Well-Being
- Subjective Health Status
- Morbidity
- Mortality

Part C Service Utilization
- Health Service Utilization
- Drugs (Extended Health Benefits)
- Home Care and Long-term Care

The data sources used to report on these indicators include: Canadian Censuses, the Canadian Community Health Survey, NWT Labour Force and Housing Surveys, national administrative databases and administrative databases of the Department of Health and Social Services.

The report explains why each indicator is included, how the NWT senior population compares to younger residents, and how NWT seniors compare to seniors nationally.

Chapter highlights are presented below.

Demographics

- While seniors make up a relatively small proportion of the overall NWT population, they are growing at three times the national rate.

- The NWT population age 60 and over has increased by 48% between 1991 and 2000. In contrast, the NWT population age 20 to 39 decreased by 6%.

- The growth in the senior population varies according to community type. The senior population in Yellowknife and regional centres (Hay River, Inuvik and Fort Smith) increased by 64% and 72% respectively, compared to a growth of 29% for seniors in the other NWT communities.

Socio-Economics

- Income levels for NWT seniors are lower than they are for seniors nationally. Approximately 58% of NWT seniors, age 65 and over, had incomes less than $15,000 in 1999, compared to 41% nationally.

- NWT seniors are more likely to participate in the labour force than their national counterparts. Approximately 18% of the population were employed or were looking for work in 1999, compared to 6% nationally.

- Completion of grade nine is often used as a proxy for literacy. Almost 50% of NWT seniors, age 60 and over, have less than a grade nine education compared to 10% age 40 to 59.

Socio-Cultural Characteristics

- Sixty-two percent of the NWT population age 60 and over is Aboriginal. In a 1999 survey, 82% of Aboriginal seniors reported they could speak an Aboriginal language, compared to 38% age 25 to 39.

- NWT seniors are more likely to volunteer their time to charities and community organizations than seniors nationally. Twenty-three percent of the NWT population age 65 and over reported volunteering compared to 18% nationally.

- In 1996, approximately 24% of population age 65 and over lived alone, compared to 16% of the population age 55 to 64 in the NWT. In Canada, 29% of seniors lived alone.

Personal Health Practices

- NWT seniors are more likely to eat less than the 5 to 10 servings of fruit and vegetables a day recommended by the Canadian Food Guide. Seventy-seven percent of NWT seniors age 65 and over reported eating less than five servings of fruit and vegetables. However, eating enough fruits and vegetables may go beyond food preferences, as nearly 40% of NWT seniors experienced or feared an inability to purchase enough food, compared to 7% of seniors nationally.

- NWT seniors tended to be less physically active, relative to seniors in peer regions (regions similar to the NWT) and seniors nationally. Approximately 87% of seniors age 65 and up were considered inactive compared to 55% in regions similar to the NWT.

- NWT seniors were slightly less likely to avoid binge drinking than seniors nationally.

- NWT seniors were much more likely to smoke (30% versus 12%) than Canadian seniors.

Subjective Health Status

- Approximately 16% of NWT seniors report having excellent or very good health. In contrast, 32% of seniors in the peer region, and 37% of seniors nationally, reported having excellent or very good health.

- NWT seniors were as likely to report having one or more chronic health problems, as were seniors in peer regions and nationally.

Morbidity

- The top three conditions afflicting NWT seniors were circulatory, respiratory and digestive diseases. NWT seniors had higher rates of hospitalization for all three of these conditions relative to seniors nationally: for circulatory diseases - 102 per 1,000 in the NWT, compared to 77 per 1,000 in Canada; for respiratory diseases - 92 per 1,000 in the NWT, compared to 33 per 1,000 in Canada; and for digestive diseases - 56 per 1,000 in the NWT, compared to 30 per 1,000 nationally.

- For NWT seniors, the main reason for hospitalization due to circulatory diseases included heart conditions (i.e., heart disease, heart failure and dysrhythmia) and strokes. Hospitalization for respiratory diseases primarily included pneumonia and bronchitis, while hospitalization for digestive diseases included intestinal conditions (i.e., gastrointestinal bleeding, Crohn's disease and colitis).

Mortality

- On average, NWT residents can expect to live for another 17.7 years once they reach age 65. Life expectancy for NWT residents at age 65 is not significantly different from residents in peer regions or elsewhere in Canada.

- Three general conditions are responsible for 74% of all deaths of seniors in the NWT: circulatory diseases, respiratory diseases and cancer. These three conditions were also responsible for 79% of the deaths nationally.

- Between 1990 and 1998, the average rates of death due to respiratory diseases were significantly higher for NWT residents age 65 to 74 (4 per 1,000) and age 85 and up (62 per 1,000), than the same age groups nationally (2 per 1,000 and 19 per 1,000).

Health Service Utilization

- NWT seniors use relatively more health services per capita than the average NWT

population or seniors nationally. In the NWT, residents 65 to 74 use services 4.1 times more than the average for the entire NWT population, compared to 2.2 times nationally. NWT residents age 75 to 84 use 9.2 times the average for the NWT overall, compared to 4.5 times nationally. And, NWT residents age 85 and up use 15.8 times the average for the entire NWT, compared to 9.8 times nationally.

- Hospital care is the single largest contributor to health care costs. Between 1997/98 and 1999/00, the average annual hospitalization rate for NWT residents age 65 to 74 was 47,995 per 100,000, compared to 21,076 per 100,000 nationally (1999/00). And, over the same time period, the hospitalization rate for NWT residents age 75 and over, was 68,397 per 100,000, compared to 36,903 per 100,000 nationally.

Extended Health Benefits Drug Plan

- Information available on drug use by NWT senior citizens is only available from the Extended Health Benefits Plan (EHB). Even though EHB covers only non-Aboriginal and Metis seniors, age 60 and over, the drug utilization data provides a useful snapshot of drug use.

- Much of the drug use by these seniors is directly and indirectly related to treating health conditions found to be prominent in the senior population.

- Between 1998/99 and 2000/01, the most common drugs used by seniors were to treat cardiovascular conditions. Annually, 29% of seniors used drugs to treat circulatory diseases (heart failure, artery blockages, angina).

- During the same time period, 27% of seniors used drugs each year to treat physical pain from headaches, chronic pain, and pain associated with recovery from surgery or an injury.

- Drugs to treat gastro-intestinal conditions were the third most prominent. Annually, 20% of the senior population used a drug to treat anything from minor heartburn to major conditions such as Chron's disease and ulcerative colitis.

- Anti-infectives, primarily antibiotics, were fourth in prominence. Annually, 20% of seniors used antibiotics in the treatment of bacterial infections.

- Hormone replacement therapies are the fifth largest category, with 18% of seniors using such drugs each year. The main drugs used were insulin for the treatment of diabetes and steroids for the treatment of asthma, arthritis, and intestinal conditions.

Home Care and Long-term Care

- Approximately 19% of NWT residents age 65 to 74 and 31% age 75 and over received a home care service in 2001. Seniors in both age groups were most likely to use nursing services, followed by homemaker, foot care, personal care and meal services. With the increasing senior population, approximately 1,300 seniors will require home care services by 2020 - assuming current utilization rates remain the same. This is a threefold increase from 2001.

- Currently, the majority of NWT seniors do not require residential care such as hospital long-term care or seniors' homes. Seniors in their late 80s and beyond are the most likely to require these kinds of care. Approximately 48% of seniors age 85 to 89 and 33% 90 and over spent at least one day in long-term care, on average between 1999/00 and 2000/01.

- Long-term care utilization rates may drop with an increasing use of home care services. Nevertheless, if current levels of long-term care use continue, one study predicts that 218 long-term care beds will be required by 2012, representing an increase 33% from approximately 164 beds in 2000/01.

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Introduction

This is the first comprehensive profile on the health of seniors in the NWT. It fulfills a commitment made to research issues affecting seniors' quality of life through a "... seniors report profiling demographics, trends and health needs of NWT seniors" (*Seniors Action Plan 2002-2003*).[1] It also builds on work done in the *NWT Health Status Report 1999* and the *NWT Health Services Report 2000.*

For the purposes of this report, health is defined as more than the absence of disease - it is a complete state of physical, mental, social and emotional well-being.[2] Health is therefore a phenomenon that cannot be directly or absolutely understood through a single measurement. The use of a large number of measures, called indicators, is necessary.[3]

The indicators examined in this report can be placed into three categories: health determinants, health status and health services. In general, health determinants influence health status, which in turn influence health services (Figure 1). For example, illiteracy can influence choice in diet and/or use of medications, and thus lead to illness and/or hospitalization. The reverse can be true as well, since the use of health services can directly influence health status, as well as health determinants. For example, prolonged hospitalization and/or permanent disability caused from an injury can lead to reduced quality of life, social isolation and limitations in activity levels.

The report has been organized with these three categories in mind:

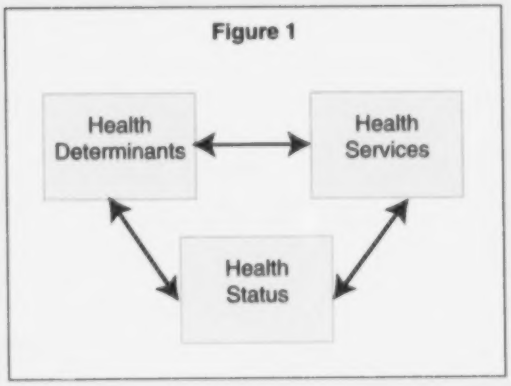
Determinants of Health and Well-Being

- Demographics
- Socio-economics
- Socio-cultural Characteristics
- Personal Health Practices

Health Status and Well-Being

- Subjective Health Status
- Morbidity
- Mortality

Figure 1



1 Seniors Interdepartmental Working Group for Seniors' Programs and Services, *Response to the Review of Programs and Services for Seniors (June 2002)*, p. 15.
2 Adapted from the World Health Organization, and used in *The NWT Health Status Report 1999*, p. 11.
3 M. Grawitz in Working Group on Community Health Information Systems and S. Chevalier et al., *Community Health Indications: Definitions and Interpretations* (Ottawa: Canadian Institute for Health Information, 1996), p.6

Service Utilization

Health Service Utilization
Extended Health Benefits (EHB) Drug Plan
Home Care and Long-term Care

Within each chapter, each topic is examined as follows:

- why it is important to examine this indicator in the context of this report;
- what is the historical picture or trend (if possible);
- what is the current picture (recent past); and
- what is predicted for the future (if possible).

What Is A Senior?

The definition, and therefore age, of a senior is somewhat arbitrary. In southern Canada, age 65 is generally used as the age when one becomes a senior citizen. Yet, even age 65 is starting to be viewed as too young since people are living longer than they were 20 years ago.[4] Life expectancy at birth has increased from 67 years in 1981 to 72 years in 1997.[5] And, life expectancy at age 65 (17.7 years) for a NWT resident is not significantly different than the national average.[6]

There are other ways of defining seniors as a group, including models that consider chronological, social, and political factors.[7]

This report examines seniors from a population health perspective. It is therefore necessary to set an age limit for consistency in reporting. In order to compare the NWT to Canada on any number of indicators, using age 65 is necessary. Nevertheless, because of the small number of people age 65 and over in the NWT, many indicators can only be usefully expressed in age 60 and up.[8]

4 Life expectancy for Canadians, as whole, moved from 72 years in 1981 to 76 years in 1997. Statistics Canada in Ibid, p. 31.
5 NWT Bureau of Statistics in Department of Health and Social Services, *The NWT Health Status Report 1999*, p. 31.
6 See Chapter 8, Section 8.1 for more detail on life expectancy at age 65.
7 See Pierre-Joseph Ulysse, *Population Aging: An Overview of the Past Thirty Years - Review of the Literature* (Health Canada, 1997), pp. 4-13.
8 For a chapter by chapter reference of why age 60 or age 65 is used to chronologically define a senior, see Appendix 2.

Limitations to the Data

There are some data limitations when profiling issues facing NWT seniors. For example, senior abuse is considered to be a problem in the NWT, as well as in other parts of the country. However, comprehensive, non-anecdotal data on senior abuse are not currently available. Also, there are general problems with looking at the senior population in detail due to the availability of data. Since the senior population is small, survey samples only allow for general pictures of the population, as opposed to national level surveys.

Determinants of Health and Well-Being

Indicators for determinants of health and well-being are numerous and diverse. Such indicators can be broadly grouped into four areas: demographics, socio-economics, social-well-being and personal health practices.

Demographic indicators are some of the most telling determinants of health status of any population, especially seniors. As David Foot states in *Boom, Bust and Echo*, "demographics explains about two-thirds of everything."[9] In particular, demographics go a long way to predict the health status of a population. For example, a younger senior population (with more seniors in their 60s and 70s) will have a better health status than one with more seniors toward those in their 80s and beyond. It is in the later years in life (i.e. 80 plus) where people require the largest amount of health-related services such as hospital care, long-term care and home care. In the NWT, the future well-being of a youthful seniors population is less predictable, as many of those younger seniors may move south before reaching their 80s.

Socio-economic indicators such as income, education and housing influence the health status of seniors. Seniors with higher levels of income, higher educations and adequate housing have a better chance of living healthier longer than those without such assets.

The links between social supports and well-being are also important. Companionship, a sense of being loved, and involvement in a wider community are key aspects of well-being. In addition, culture and language play a role in helping to share a sense of identity and belonging to a group. These factors are especially relevant in the North, with a senior population characterized by rich and diverse Aboriginal and Eurasian cultural backgrounds.

Personal health practices play a major role in determining physical health and general well-being of people at all ages, and especially seniors. Seniors who exercise regularly, eat well-balanced meals and do not smoke or abuse alcohol are generally healthier than those who do the opposite. While these are for the most part personal choices, is it important to keep in mind that other factors influencing lifestyle choices and personal health practices include education, literacy and income.

9 David Foot, *Boom, Bust and Echo* (MacFarlane, Walter and Ross: Toronto, 1996) p.2.

Chapter 1
Demographics[10]

Past Trends

Seniors age 60 and over are the fastest growing age group of the NWT. Compared to Canada, the senior population in the NWT is proportionately smaller, but it is growing at three times the national rate. As seen in Figure 1.1, the population age 60 and over grew by 48%, from 1795 to 2653, in the territory compared to 16% nationally between 1991 and 2000.

In terms of age groups, the population of younger seniors (age 60 to 69) grew by 46 to 48% as seen in Figure 1.2. Seniors 70 to 74 years of age grew the fastest at 72%, with older seniors growing at progressively lower rates.

This rate of growth was not uniform across the NWT. The population of seniors in the regional centres (Hay River, Inuvik and Fort Smith) grew by 72%. Seniors in Yellowknife exhibited the next fastest growth rate (64%). Finally, the senior population in the other communities grew by 29%.

As seen in Figure 1.2, the non-Aboriginal senior population grew at a rate almost twice that of Aboriginal senior population between 1991 and 2000.

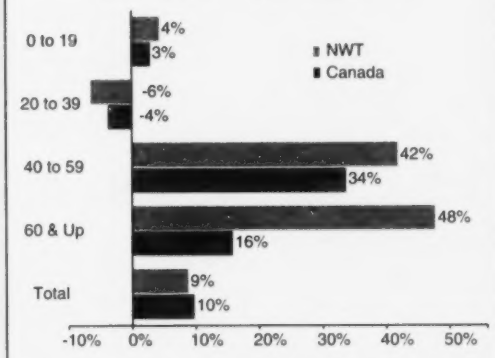
Present

In 2000, seniors age 60 and over made up 6.3% of the population of the NWT compared to 16.6% within the Canadian population.

Even though seniors are the fastest growing age group, the population remains relatively small. As seen in Figure 1.3, seniors age 60 and up make up the smallest proportion of the population.

Although women and men make up equal proportions of the senior population, women slightly outnumber men from age 75 onwards.

Figure 1.1
Population Change by Age
NWT & Canada, 1991 to 2000



Sources: NWT Bureau of Statistics and Statistics Canada.

Figure 1.2
Change in Senior Population by Various Characteristics
NWT, 1991 to 2000

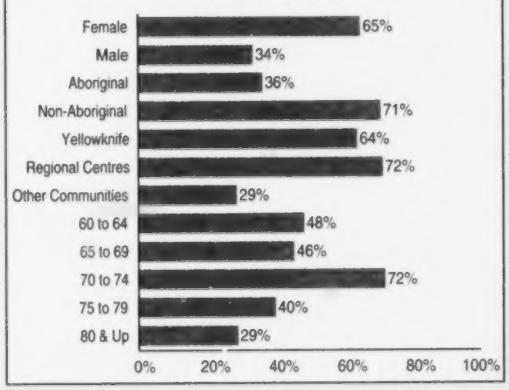


Figure 1.3
Population by Age
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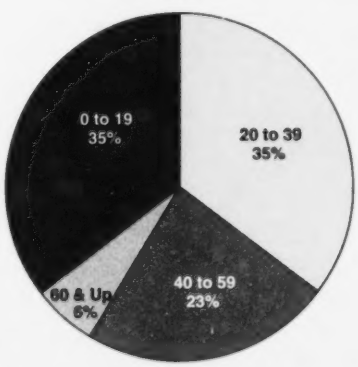

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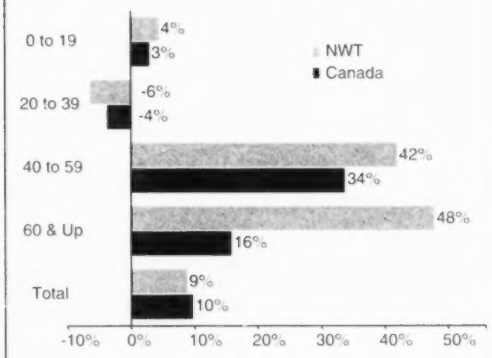

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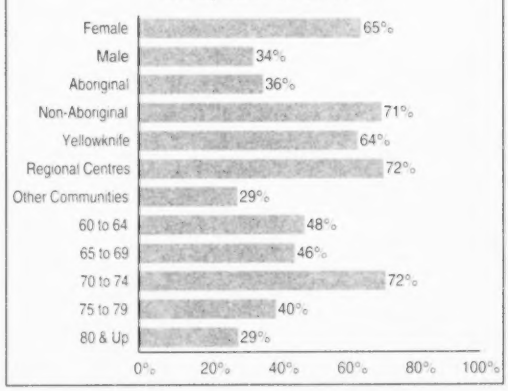

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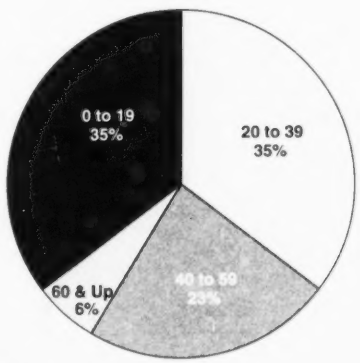

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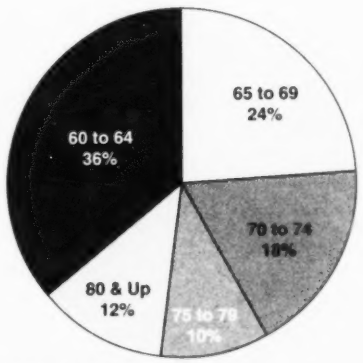
Figure 1.4
Seniors by Age
2000

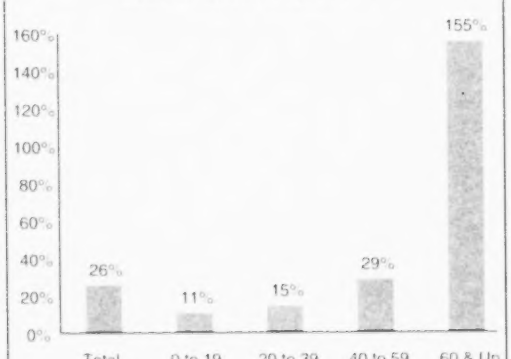


Source: NWT Bureau of Statistics

Figure 1.5
Seniors by Ethnicity
2000

Source: NWT Bureau of Statistics

Figure 1.6
Population Change by Age
2000 to 2020 Projections



Source: NWT Bureau of Statistics

As seen in Figure 1.4, 60% of the senior population is under the age of 70, 28% is between age 70 to 79, and 12% is age 80 or older.

The majority of the senior population (45%) lives in smaller communities. Another 30% of seniors live in regional centres, and the remaining 25% live in Yellowknife. As seen in the Past Trends section, the senior population is growing faster in larger centres than in the smaller communities.

Figure 1.5 shows that over 60% of seniors are Aboriginal. The non-Aboriginal senior population, however, is growing faster than the Aboriginal senior population.

Future Trends

Recent population projections show the senior population continuing its rapid growth into the foreseeable future.[11] As seen in Figure 1.6, the number of people age 60 and over is expected to more than double from 2,653 to about 7,000 by 2020.[12] In contrast, the population under the age of 60 is expected to grow at a fraction of the pace of seniors, but still represents an increase of 17% by 2020.

11 The population projections used in the Future Trends section were developed in the Spring of 2000, by the Bureau of Statistics. They are highly detailed, but also, subject to revision, as future Census information becomes available.

12 The population age 65 and up is expected to reach 4,600 by 2020. NWT Bureau of Statistics (Custom tabulations, 2000).

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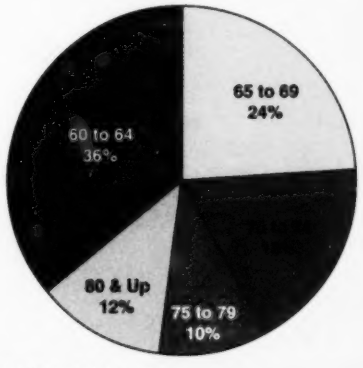

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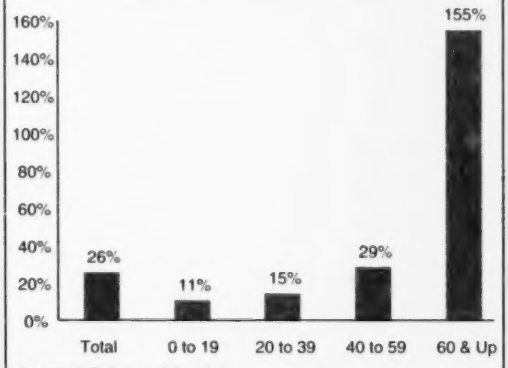

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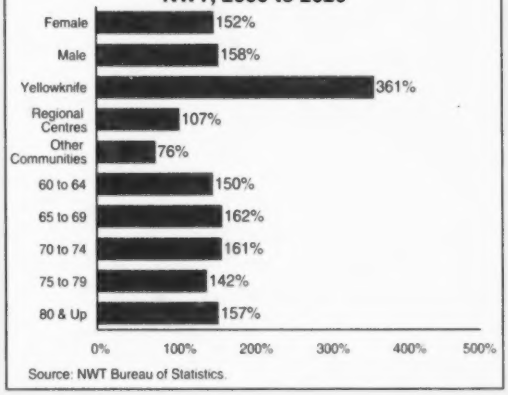
Within the senior population itself, the rate of growth by men and women is expected to be the same (Figure 1.7). And, the senior population is expected to grow at relatively similar rates across age groups. However, the rate of growth amongst seniors in Yellowknife is expected to be over three times the growth predicted in the regional centres, and almost fives times the growth expected in other communities.[13]

Although the growth rates may change, the increase in the senior population in Yellowknife will be significant since much of the growth is likely to be fueled by the non-Aboriginal senior population. Projections by ethnicity and age are not currently available, but the trend of the past 10 years has seen a faster growth in non-Aboriginal senior population. Much of this growth has been in regional centres and Yellowknife.[14]

The first non-Aboriginal residents born in Yellowknife entered their senior years in the later half of the 1990s. Many more seniors in Yellowknife have been born elsewhere in Canada, and others from outside of Canada.[15] These individuals were born in the 1930s to 1950s, came north in large numbers in the 1960s and 1970s, had families, and are now beginning to reach the age of retirement. Some will eventually move south, but others will stay, due to an attachment to the place that has been their home for decades, and where their children and grandchildren now reside. Also, as the city grows, commercial services and recreational facilities expand, encouraging people to stay longer.

Figure 1.7
Projected Growth in Senior Population by Various Characteristics
NWT, 2000 to 2020



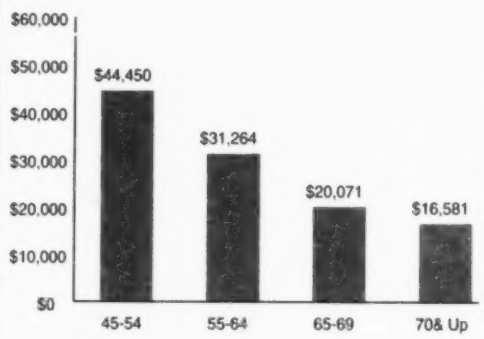
Source: NWT Bureau of Statistics.

13 It is important to realize that the more specific a population projection, the greater the degree of inaccuracy in the projection. For example, the dramatic increase in seniors - more than tripling in two decades - projected for Yellowknife may not come to pass exactly as predicted.

14 Between 1991 and 1996, the proportion of seniors, age 65 & up, born outside of the NWT increased from 29.7% to 39.1%. The overwhelming majority of these seniors reside in Yellowknife and the regional centres. Statistics Canada, 1991 and 1996 Censuses.

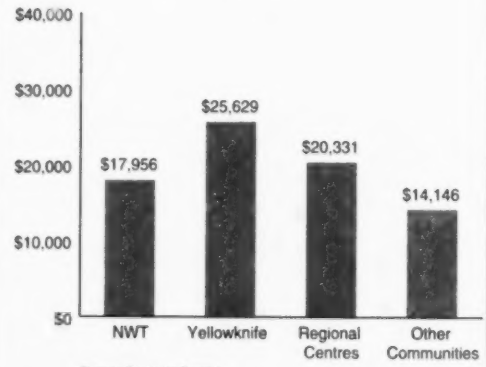
15 Between 1991 and 1996, the proportion of seniors, age 65 & up, born outside of Canada, increased from 8.7% to 11.5%.. Statistics Canada, 1991 and 1996 Censuses.

Figure 2.1
Average Income by Age
NWT, 1995



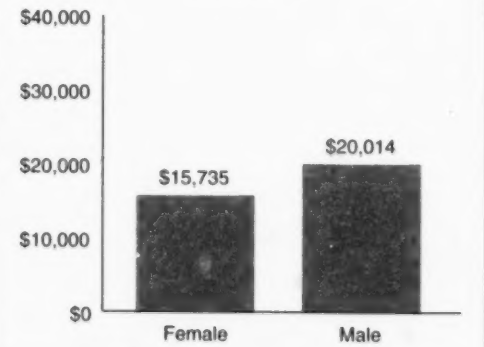
Source: Statistics Canada.

Figure 2.2
Average Income of Seniors by Community Type
NWT, 1995



Source: Statistics Canada.

Figure 2.3
Average Income of Seniors by Sex
NWT, 1995



Source: Statistics Canada.

Chapter 2
Socio-Economics

Income

Financial security is an important determinant of well-being and health. Lack of financial security can lead to isolation, lower self-esteem, and poorer dietary and accommodation choices.[16]

Profiling the income levels of seniors, age 65 and up, in a meaningful way is difficult. A poverty level has not been established for the NWT. As can be seen in Figure 2.1, average income drops with age. Yet, seniors are more likely to own homes (mortgage-free), than younger adults. Also, seniors may live with their children. In either case, housing, often the largest living expense, is taken care of, resulting in a diminished need for income.

Another way to look at income is within the NWT itself. In 1995, seniors in Yellowknife had the highest average incomes at $25,629 (See Figure 2.2). Seniors in regional communities had much lower incomes at $20,331, and seniors in the smaller communities had even lower incomes at an average of $14,146.

The main limitation when comparing seniors incomes across the NWT is the lack of similarity in family structures. Aboriginal seniors are more likely to live with their children than are non-Aboriginal seniors. Almost all the seniors living outside of the four largest NWT communities (Yellowknife, Hay River, Inuvik and Fort Smith) are Aboriginal.

Nationally, an income disparity exists between senior women and senior men. In general, men have higher incomes into their senior years likely because men earn more on average than women during their working years. In the NWT there is also an income disparity between senior men and women. Figure 2.3 shows that in 1995 men had an average income of $20,000 compared to $15,000 for women.

16 Macleod and Associates, pp. 11-15. Also, see Pierre-Joseph Ulysse, *Population Aging: An Overview of the Past Thirty Years - Review of the Literature* (Health Canada, 1997), pp. 12-13.

Comparing incomes of seniors in the NWT to incomes of seniors in Canada, as a whole, can be problematic. The cost of living in the NWT is much higher, and the mix of senior benefits in the NWT also differs from those available in southern Canada.

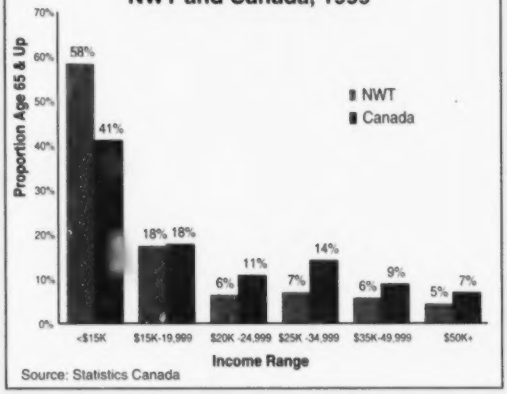
As seen in Figure 2.4, proportionately more seniors (58%) in the NWT reported incomes of less than $15,000 in 1999 than the Canadian average for seniors (41%). At the other end of the income spectrum, 11% of NWT seniors had incomes $35,000 and up, compared to 16% nationally.

It is important to keep in mind that income alone is not a complete indicator of economic well-being. NWT seniors have access to benefits that are more comprehensive than those received by most seniors nationally (i.e., Extended Health Benefits and Housing Benefits). Also, a greater proportion of seniors live with one or more people, compared to the national average (See Chapter 3). The advantage of sharing household expenses is not reflected in individual income statistics.

In terms of the future, there has been a perception in the general Canadian population that government-funded pension plans will be under increasing pressure to keep up with the demand from the wave of "boomers" set to retire between 2012 and 2034.[17] Increasingly, Canadians – especially the boomer generation – have been putting money into registered retirement savings plans.[18] Yet, some have argued that the divide between haves and have-nots will grow in future generations of Canadian seniors.[19]

One can neither dismiss outright nor adopt fully southern Canadian trends when considering the NWT. On the one hand, the current senior population in the NWT is overwhelmingly Aboriginal. Not only are they culturally distinct, they also do not necessarily have the same set of concerns or desires as non-Aboriginal seniors in the south, or even those in the north. Future Aboriginal seniors (over the next two or three decades) are likely to be culturally different than the present senior population (See Chapter 3). On the other hand, non-Aboriginal seniors in the NWT are growing faster than Aboriginal seniors (See Chapter 1).

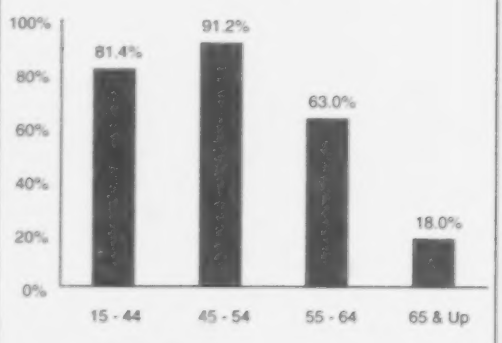
Figure 2.4
Proportion of Tax Filers by Income Range - Age 65 & Up
NWT and Canada, 1999



Source: Statistics Canada

17 David K. Foot, *Boom, Bust and Echo*, ch11. Over the course of the 1980s and 1990s, the percentage of income that seniors in Canada received from work-related pensions and RRSPs more than doubled. Health Canada, Canada's Aging Population, p. 13.
18 An increasing number of Canadian tax filers have been contributing to an RRSP over the 1990s. See Ernest B. Akyeampong "RRSPs in the 1990s" in *Perspectives* Spring 2000.
19 National Advisory Council on Aging, *Expression*, Vol. 12, No. 2, Spring 2000, pp. 4-5.

Figure 2.5
Participation in Labour Force by Age
NWT, 1999



Source: NWT Bureau of Statistics

In terms of predicting future income levels, there are two factors related to abovementioned demographic trends that are important to consider. Firstly, the NWT economy has been characterized by relatively high-pay mining and government jobs over the last three decades or more. Originally, such jobs were largely occupied by non-Aboriginals, many of whom left the territory before or at retirement. Over the last three decades this has changed, with an increasing proportion of these high wage jobs being held by Aboriginal residents,[20] and an increasing proportion of non-Aboriginal people staying in the NWT past age 65 (See Chapter 1). These high-paying jobs often come with pensions that supplement the Canadian Pension Plan benefits, and provide options for people to have savings. This will potentially boost their retirement incomes relative to their ancestors.

Secondly, while income levels by ethnicity are not available, income by community type show higher incomes for seniors living in Yellowknife and the regional centres than for seniors living in other communities. Relative to the senior population in the other communities, the growth of the senior population has been greater, and is expected to continue to grow at higher rates (See Chapter 1). This predicted growth in higher income seniors will have a positive effect on the average income of the future NWT senior population.

Employment

Traditionally people have retired between the ages of 60 and 65. Now some people are continuing to work past the age of retirement, often by choice not economic need.

A job provides more than just extra income, it provides social stimulation. This employment status can influence seniors health as isolation can lead to health problems (See Chapter 3).

Figure 2.5 shows the participation rate in the labour force - this reflects the number of people employed or actively seeking employment divided by the total population. In 1999, 18% of people age 65 and up were either employed or actively seeking employment. In comparison, only 6% of seniors across Canada were participating in the labour force.[21]

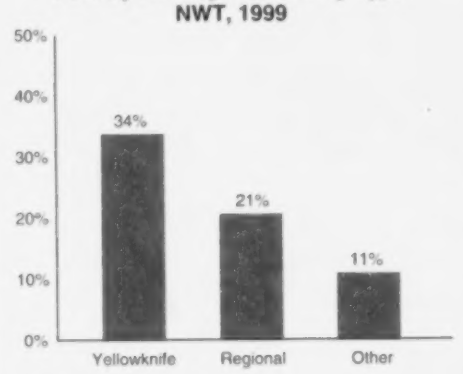
20 Although not measuring wages, *NWT Labour Force Surveys* show a steady increase in the participation rate of Aboriginal residents in the labour force between 1989 and 1999. In 1989 (excluding Holman), the Aboriginal participation rate, age 15 and up, was 58.8%. In 1994, the rate had risen to 61.9% and by 1999 it had risen even further to 65.3% (1994 and 1999 figures include Holman). NWT Bureau of Statistics, *Labour Force Surveys 1989, 1994, and 1999.*

21 Statistics Canada in Health Canada, *Canada's Seniors*, Fact Sheet No. 18.

As seen in Figure 2.6, Yellowknife had the highest senior (age 65 and up) employment participation rate at 34%, compared to 24% in the regional centres and 11% in the other communities. The regional variation in rates is not unusual given that almost all seniors in the labour force were non-Aboriginal. According to the *1999 NWT Labour Force Survey*, over 45% of non-Aboriginal seniors were in the labour force compared to less than 5% of Aboriginal seniors.

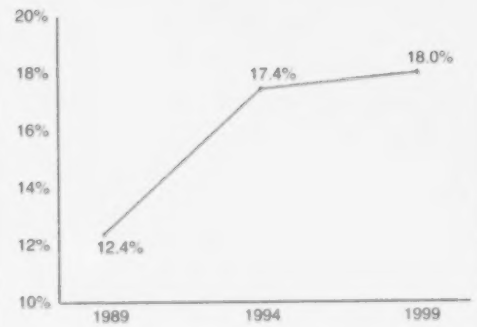
It appears that seniors are increasingly staying in the labour force. As shown in Figure 2.7, the proportion of seniors in the labour force in 1989 was 12.4%, rising to 17.4% in 1994, and 18% in 1999. It cannot be determined whether or not this increase in labour force activity was more to do with choice versus economic need.

Figure 2.6
Seniors in Labour Force
Participation by Community Type
NWT, 1999



Source: NWT Bureau of Statistics.

Figure 2.7
Seniors in Labour Force
NWT, 1989, 1994 & 1999



Source: NWT Bureau of Statistics.

Education

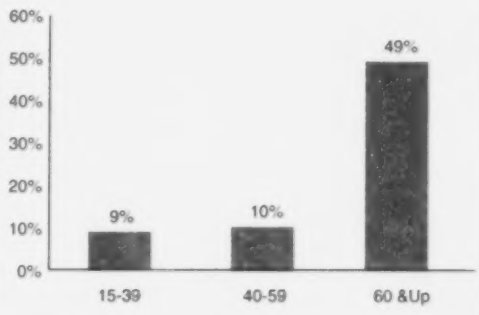
Education is an important determinant of health.[22] Generally, studies have found that higher education levels correlate with a person's well-being and health. Education is increasingly influencing income — the higher the education, the higher the income.

A more basic outcome of education is literacy. Given that comprehensive statistics on literacy levels are not available in the NWT population, the level of educational attainment — completion of grade nine — is often used as a proxy indicator of being literate. Of course, there are people with less than grade nine who are literate, and those with much higher levels of education who are illiterate or have low literacy skills.

Being able to read and write, as well as having basic math skills, are requirements for independence. Seniors who rely on others to pay bills and write cheques run a higher risk of being victimized than those who can do these daily tasks themselves. Seniors who cannot read ingredient labels on food products are less able to make healthy choices when shopping for groceries. And seniors who cannot read the instructions on their medications run the risk of serious health complications through the overuse or the unsuitable mixing of medicines.

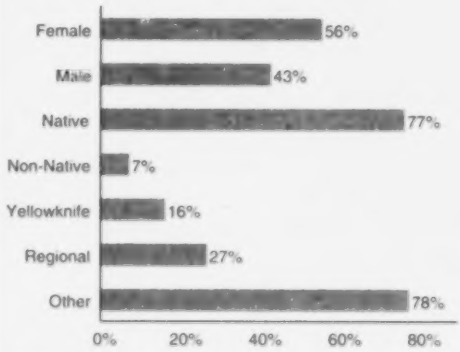
22 Macleod and Associates, pp. 18-20.

Figure 2.8
Less than Grade 9 by Age
NWT, 1999



Source: NWT Bureau of Statistics.

Figure 2.9
Seniors with Less than Grade 9
Various Characteristics - NWT,1999



Source: NWT Bureau of Statistics.

Seniors in both the NWT and Canada are more likely to have lower levels of education than the adult population as a whole.[23] The most current data on educational levels comes from the *Labour Force Survey*. Approximately 49% of NWT seniors age 60 and up had less than a grade nine education, compared to 10% of NWT residents age 40 to 59 (See Figure 2.8). However, the proportion of seniors with less than grade nine varies dramatically within the senior population. As seen in Figure 2.9, female seniors were more likely to have less than a grade nine education than male seniors. The difference between Aboriginal and non-Aboriginal seniors is even greater: 77% of the Aboriginal population age 60 and over had less than grade nine compared to 7% for non-Aboriginal seniors.

Education levels also differed dramatically by community type. In the smaller communities, 78% of people age 60 and over had less than a grade nine education. In contrast, 16% of seniors in Yellowknife had less than grade nine. These differences are consistent with the distribution of Aboriginal and non-Aboriginal seniors in NWT communities.

Despite the low education levels in the NWT — and the inequities between ethnic groups and community type — the future looks bright. Only 10% of tomorrow's seniors will have less than a grade nine education.[24] This means future seniors in the NWT, as well as in southern Canada, will be better able to read and write than seniors today. These skills will contribute to a senior population that is more active and more independent than past generations of seniors.

Housing

Access to shelter is a prerequisite for life. Housing must also meet certain standards if it is to contribute to good health. Good housing minimizes disease and injury, and contributes to the physical, mental and social well-being of the population.

23 The 1996 Census found 37% of Canadian residents, age 65 & up, had less than a Grade Nine education compared to 72% for NWT residents the same age. Statistics Canada, 1996 Census, in Health Canada, *Canada's Seniors Fact Sheet No. 9* and NWT Department of Health and Social Services, *The NWT Health Status Report 1999*, p. 40.

24 Not all of the people that spend part or all of their senior years in the NWT, over the next twenty years, will be representative of the overall rate, age 40 to 59.

The World Health Organization identified several housing features that have important direct or indirect effects on the health of occupants, including:

- an adequate supply of good quality drinking water;
- overcrowding, which can lead to household accidents and increased transmission of airborne infections such as acute respiratory infectious diseases;
- proper disposal of refuse; and,
- indoor air quality.[25]

In addition, if the cost of housing consumes too much available household income, other needs, including health needs, may suffer.

The NWT Housing Corporation has conducted several surveys to monitor housings conditions and needs. The latest survey (2000) identified three types of housing problems:

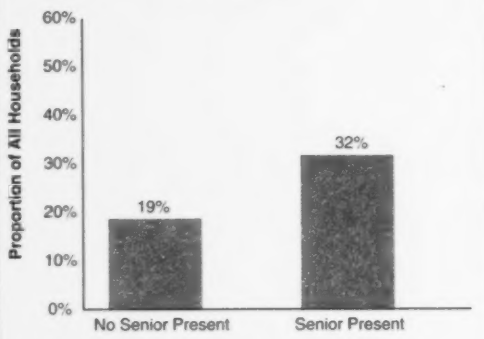
- suitability — which refers to the problem of overcrowding;
- adequacy — which refers to the physical condition of the dwelling; and,
- affordability — which refers to the extent that a household pays an excessive amount for shelter.

Houses with one or more of these problems, in addition to a total income below a community-specific threshold, are considered to be 'core need' households. (A large number of NWT households with housing problems were not considered core need because they were assessed as having sufficient income to solve their housing problem(s) without government assistance.)

As seen in Figure 2.10, 32% of all households with a senior age 60 and over were included in the core need category. Overall, households without seniors were less likely to fall within the core need category.

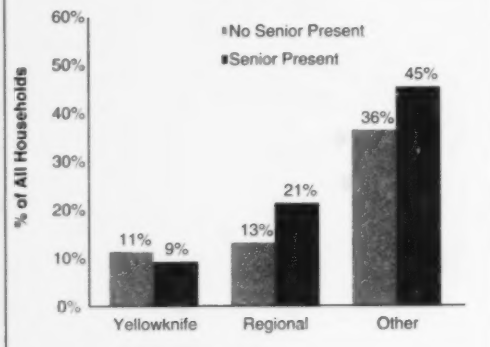
When examined by community type, the proportion of households within the core need category changes dramatically. Approximately, 9% of Yellowknife households with seniors were in the core need category, compared to 21% in the regional centres and 45% in the other communities (Figure 2.11).

Figure 2.10
Core Need Households
NWT, 2000



Source: NWT Housing Corporation and NWT Bureau of Statistics.

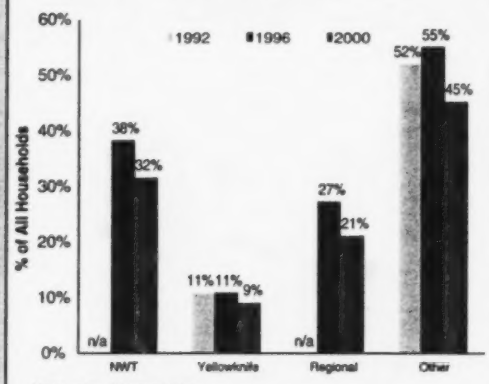
Figure 2.11
Core Need Households by by Community Type
NWT, 2000



Source: NWT Housing Corporation and NWT Bureau of Statistics.

25 World Health Organization, *The World Health Report 1998: Life in the 21st Century A Vision for All* (WHO 1998) in Health and Social Services, *The NWT Health Status Report 1999*, p. 47.

Figure 2.12
Core Need Households with Senior Present



Note: n/a = Not available.
Source: NWT Housing Corporation and NWT Bureau of Statistics.

The proportion of seniors households in core need has dropped over time (Figure 2.12).[26] Between 1996 and 2000, the overall NWT proportion of households in core need dropped from 38% to 32%, and from 27% to 21% regionally. In 1992, 52% of households in the smallest communities were considered core need, compared to 45% in 2000. Yellowknife households also experienced a small drop from 11% to 9% over the same two surveys.

26 1992 data were not available for the Regional Centres (See Appendix 2 for more detail).

Chapter 3
Socio-Cultural Characteristics

Social well-being can be measured in a wide variety of ways. Some of the major factors influencing health are presented.

Culture

Culture is important as it provides the sense of identity and belonging to people grouped along similar ethnic and language lines. It is especially relevant in the North, with a senior population characterized by rich and diverse Aboriginal, Euro-Canadian and other cultures.

It is difficult to quantify culture in any society, especially within a sub-set of a society. Many of the practices that help define a culture cannot be quantified. However, some of the more essential building blocks of culture such as ethnicity and language can be quantified. Statistics on both indicators are presented.

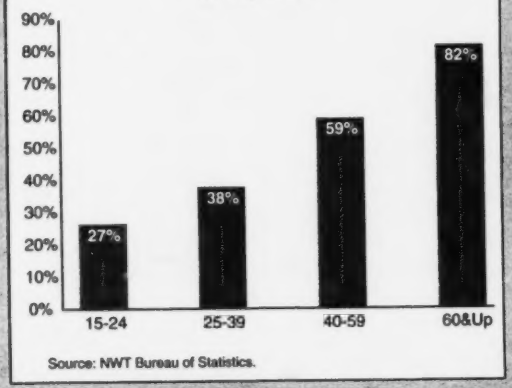
As detailed in Chapter 1, the senior population of the NWT is largely Aboriginal, but this is changing. The non-Aboriginal senior population is growing faster, and in an ethnically diverse manner.

In 1991, approximately 8.7% of Canadian seniors age 65 and up were born outside of Canada. By 1996, this proportion had grown to 11.5%. Details on continents or countries of origin are few; however, we do know recent migration for all ages in total was greatest from Asia and Africa.[27]

Over 60% of the NWT senior population (age 60 and up) is Aboriginal, and it is also diverse. Of the Aboriginal senior population, approximately 70% are Dene, 12% are Inuvialuit/Inuit and 18% are Metis.[28]

As Figure 3.1 shows, the ability to speak an Aboriginal language is strongly associated with age. Over 80% of Aboriginal seniors can speak an Aboriginal language, compared to approximately

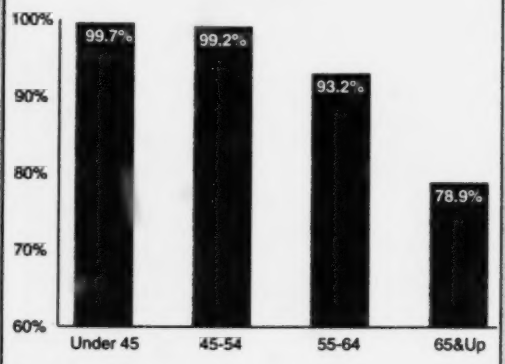
Figure 3.1
Aborginal People who can speak an Aboriginal Language
NWT, 1999



Source: NWT Bureau of Statistics.

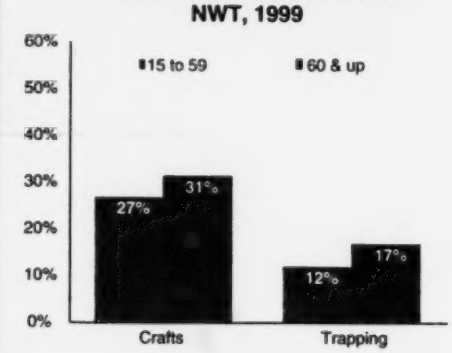
27 Statistics Canada, 1991 and 1996 Censuses. And Department of Health and Social Services, *The NWT Health Status Report 1999*, p. 56.
28 NWT Bureau of Statistics, *1999 NWT Labour Force Survey*.

Figure 3.2
Knowledge of English by Age
1996 Census



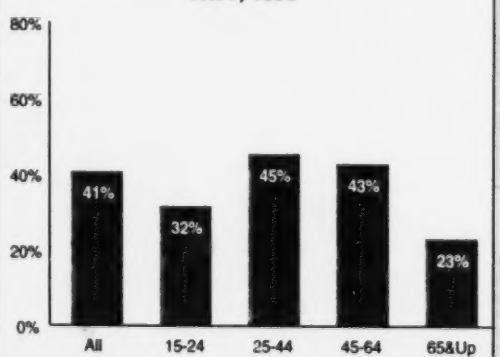
Source: Statistics Canada.

Figure 3.3
Aboriginal People Involved in Cultural/Traditional Activities
NWT, 1999



Source: NWT Bureau of Statistics.

Figure 3.4
Volunteered by Age Group
NWT, 1999



Source: NWT Bureau of Statistics.

27% under the age of 25, and 38% between the ages of 25 and 39. This means that while most Aboriginal seniors today can speak an Aboriginal language, this is not likely to be case in the future.

As Figure 3.2 shows, the ability to understand English is somewhat related to age. Approximately 79% of seniors age 65 and over have knowledge of English, compared to over 90% for people under the age of 65.[29]

One measurement of culture is a population's connection to its past. Aboriginal seniors have a strong connection to their past, both in terms of language and the practice of traditional activities. Some of these activities and language use have been documented in the *NWT Labour Force Survey*.

As seen in Figure 3.3, Aboriginal seniors are more likely to be involved in making crafts and trapping. Approximately 31% of Aboriginal seniors were involved in making crafts, compared to 27% age 15 to 59. Almost all of the Aboriginal seniors making crafts were women. Seventeen percent of Aboriginal seniors trapped, compared to 12% for those age 15 to 59.

Volunteering

Seniors who are active in the community are more likely to be healthier than those who are not. Meeting people and interacting with others on a regular basis helps seniors to thrive. Volunteering is one way to be active in the community.

The 1999 *NWT Labour Force Survey* asked people whether or not they volunteered. As seen in Figure 3.4, 25 to 44 year olds were most likely to have volunteered, with the population age 45 to 64 coming a close second. Twenty-three percent of NWT

29 The NWT Labour Force only asked about knowledge and use of Aboriginal Languages. Census data, currently available, is broken out by the age groups seen in Figure 4.1.2, and is not broken out by ethnicity.

seniors reported volunteering, representing a higher proportion than was case for Canada (18%, see Figure 3.5).

Overall, there was not much difference in volunteering by female and male seniors. A significantly larger proportion (46%) of non-Aboriginal seniors reported volunteering compared to Aboriginal seniors (12%).

Within each ethnic grouping there were some gender differences, with men more likely to report having volunteered than women (see Table 3.1). The difference between volunteering rates amongst Aboriginal and non-Aboriginal seniors is primarily due to combination of three factors: historical experience, the prevalence of volunteer organizations in the community, and differing concepts of volunteering.

Historically, volunteer organizations are largely a Euro-Canadian phenomenon. For many Aboriginal people, contact with such organizations would have been relatively non-existent until the last century, contact would likely have been higher in the larger centers of the North than the smaller communities.

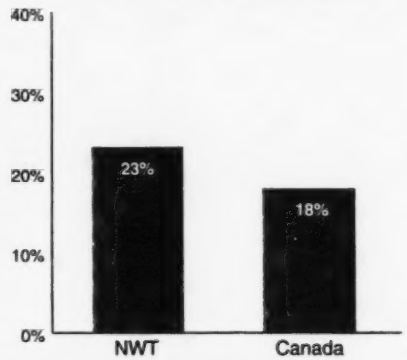
Today most large volunteer organizations operate in Yellowknife and, to some extent, regional centres (Hay River, Inuvik and Fort Smith). Most Aboriginal seniors live outside of Yellowknife, and many live in smaller communities. Conversely, most non-Aboriginal seniors live in Yellowknife, with few living in the smaller NWT communities. Thus, the opportunity for Aboriginal seniors to be involved in more structured forms of volunteering is less than it is for non-Aboriginal seniors.

Furthermore, surveys collecting information on volunteering may not include other kinds of volunteer time that are common in Aboriginal communities. For example, Aboriginal seniors provide invaluable instruction in areas of traditional knowledge and skills to younger members of their communities.

Living Arrangements

Living alone can be a matter of choice, but it can indicate lack of support, particularly in a time of need. An immediate need

Figure 3.5
Proportion of Seniors Volunteering
NWT 1999 and Canada 2000



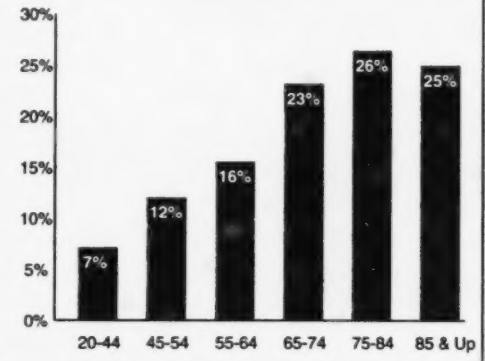
Sources: NWT Bureau of Statistics and Statistics Canada.

Table 3.1
Proportion of Senior Population Volunteering
NWT, 1999

	Female	Male	Both
Both	23%	20%	26%
Aborginal	12%	11%	12%
Non-Aborginal	46%	41%	50%

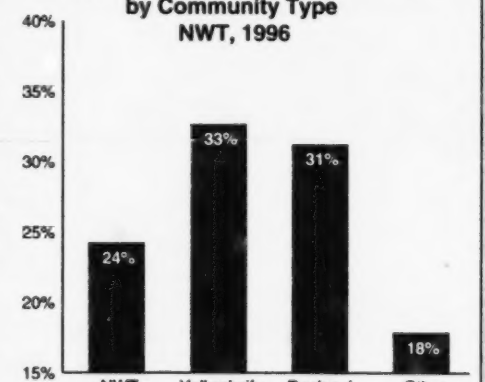
Source: NWT Bureau of Statistics.

Figure 3.6
Proportion of Population Living Alone by Age
NWT, 1996



Source: Statistics Canada

Figure 3.7
Proportion of Seniors Living Alone by Community Type
NWT, 1996



Source: Statistics Canada

may include anything from a fall or heart attack to an emergency such as a fire or break-in. And, those who live alone have a greater potential for social isolation, even though they may still have an active social support system. The greater the social isolation, the greater the likelihood for seniors "*to have a wide range of health problems and risk factors which further limit their social support networks.*"[30]

The chance of living alone increases with age. According to the 1996 Census, approximately 24% of NWT seniors age 65 and up live alone. As seen in Figure 3.6, 7% of adults 20 to 44 years old live alone. The proportion of the population living alone increases dramatically in the population 45 to 54, and then again in the population 65 and up.

The proportion of seniors living alone varies depending on which type of community they live in. Figure 3.7, shows the proportion of the population age 65 and over living alone in Yellowknife at 33%, followed closely by the regional centres at 31%. The smaller communities have the lowest proportion of seniors living alone at 18%.

In Canada the proportion of seniors living alone has increased over the last 10 to 20 years. In 1996, 29% of seniors living outside of residential care lived alone. This is up from 20% in 1971.[31]

30 Linda Macleod and Associates, *Toward Healthy - Aging Communities: A Population Health Approach* (Health Canada, 1997), p. 14.

31 Statistics Canada in Health Canada, *Canada's Seniors*, Fact Sheet No. 8. Historical statistics for the NWT were not available at the time of the release of this report.

Chapter 4
Personal Health Practices

The source of most of the data for this chapter is the *2000-01 Canadian Community Health (CCH) Survey*. The survey findings on NWT seniors are based on a small sample of the NWT population age 65 and over. Given the small sample size of the CCH Survey, attempts have been made to make the reader aware of where a difference between age groups or between seniors of two or more jurisdictions is statistically significant or insignificant.[32] Readers should be cautioned in drawing conclusions based on one or two measures.

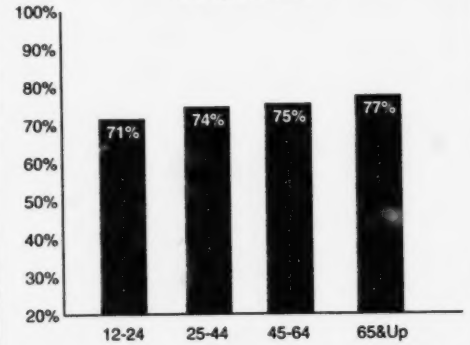
Diet

Eating well contributes to healthy aging. This means choosing a variety of foods recommended by the *Canada Food Guide*. CCH Survey results indicated most people in the NWT are not meeting the daily *Canada Food Guide* recommendations of five to ten servings of fruit and vegetables a day.[33] The CCH Survey also asked people about their financial ability to acquire food.

Figure 4.1 profiles by age group the proportion of the NWT population eating less than the recommended daily intake of fruits and vegetables. At first glance, it appears that as people age, there is a marginal increase in the population eating less than five servings of fruit and vegetables a day. However, these apparent increases between one age group and the next are not statistically significant.

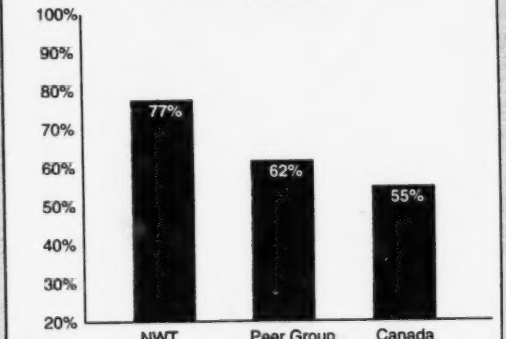
Figure 4.2 provides a comparison of inadequate fruit and vegetable consumption amongst seniors in the NWT, Canada and NWT's peer group.[34] A higher proportion (77%) of NWT seniors eat less than the recommended amount of fruits and vegetables. This is significantly higher than the average Canadian senior but not significantly different from the peer group.

Figure 4.1
Fruit and Vegetable Consumption
Less than Five Servings Per Day by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.2
Fruit and Vegetable Consumption
Less than Five Servings Per Day
Seniors, 2000-01



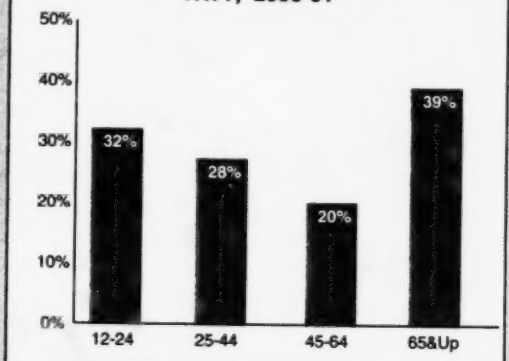
Sources: Statistics Canada and NWT Department of Health and Social Services.

32 Also, data have only been presented in a manner that allows for the highest reliability possible. In most cases, the data cannot be presented by each sex due to the unreliability of the results based on very small survey samples. See Appendix 2 for more details on statistical significance.

33 Health Canada, *Canada's Food Guide to Healthy Eating*, 1992.

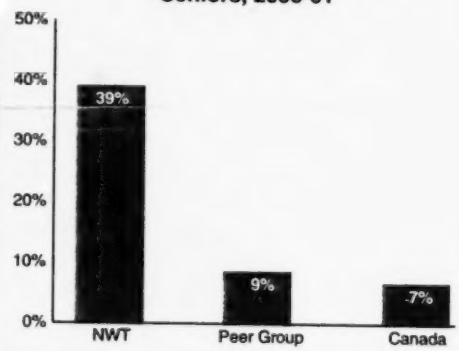
34 The Canadian Community Health Survey provides data at health region level. Peer groups are groupings of health regions with similar demographic and socioeconomic characteristics. See Appendix 2 for a list of health regions in the peer group.

Figure 4.3
Proportion of Population Experiencing Food Insecurity by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.4
Proportion of Population Experiencing Food Insecurity
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

It is clear from the survey data that there is plenty of room for improvement in the diet of NWT seniors (as well as for all ages). Nevertheless, fruit and vegetable consumption is not a simple matter of choice in the NWT. Choosing a variety of healthy food may be a challenge in the NWT due to cost and availability. The CCH Survey asked respondents if, in the last year, they or someone in their house:

- had worried that there would not be enough to eat because of lack of money;
- not had enough food because of lack of money; or
- not been able to have the quality or variety of foods they wanted because of lack of money.

These issues are collectively referred to as food security issues.

Figure 4.3 shows by age group the proportion of the NWT population that experience food insecurity. Approximately 40% of seniors in the NWT indicated lack of money caused food insecurity in the past year. This is double the percentage for the 45 to 64 year old age group.

Figure 4.4 compares NWT seniors with seniors in NWT's peer group and seniors in Canada. There are large, statistically significant differences in food insecurity between the NWT and the peer group, as well as between the NWT and Canada. In contrast to the NWT, where 40% of seniors reported food insecurity, only 9% and 7% of peer group and Canadian seniors, respectively, reported food insecurity.

Wise food choices can help people of all ages stay healthy and prevent or delay the onset of chronic diseases and conditions such as cancer, heart disease, osteoporosis, hypertension and bowel dysfunction. These diseases and conditions are some of the main causes of hospitalization and morbidity among the senior population in the NWT (see Chapters 6 and 7).

Physical Activity

The CCH Survey provides an extensive examination of physical activity. People surveyed were asked about the types and frequency of their participation in physical activity. The

activities examined ranged from gardening to walking, fishing to hunting, and dancing to curling. From the responses, Statistics Canada was able to approximate the amount of calories of energy per day a person expended. People were then grouped into three categories of activity: active, moderate and inactive.

Active people were those who exercised enough to receive cardiovascular benefits. People who were moderately active might experience some health benefits but little cardiovascular benefit. Inactive people are more likely to suffer from adverse health effects over the long term.

As seen in Figure 4.5, the 2000-01 CCH Survey indicated 87% of territorial seniors were inactive, with activity levels decreasing as the population ages.

While one would expect a decrease in activity as people age, NWT seniors are significantly less active than their peers and the average for Canadian seniors (Figure 4.6).

Alcohol Use

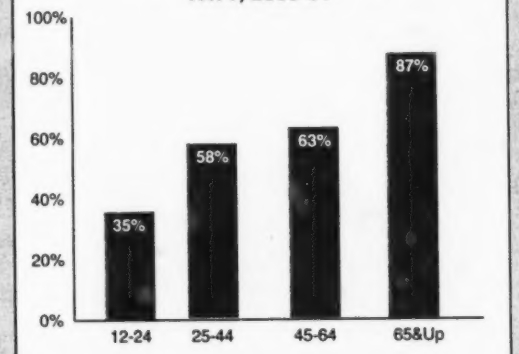
The abuse of alcohol can lead to a number of social and health problems. Short-term abuse of alcohol can lead to injury and death through violence and accidents. Long term alcohol abuse can lead to a deterioration of cognitive skills, higher risk of liver disease, and other mental, emotional and physical problems.

The following three measurements help to assess the use of alcohol by seniors:

- the proportion consuming alcohol in past year;
- the proportion of drinkers consuming alcohol less than once a week; and,
- the proportion of drinkers consuming less than five drinks on one occasion.[35]

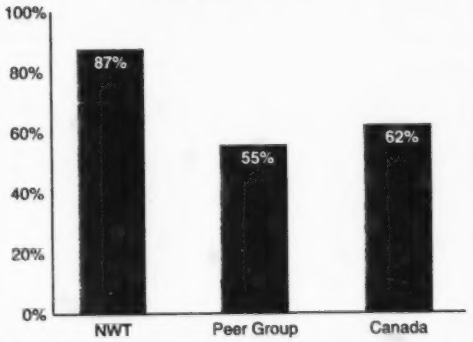
Figure 4.7 reveals that less than half of people 65 and older in the NWT drank alcohol in the year prior to the 2000-01 CCH Survey. In contrast, between 70% and 80% of adults age 25 to 64 consumed alcohol at least once in the same time period.

Figure 4.5
Proportion of Population Physically Inactive by Age NWT, 2000-01



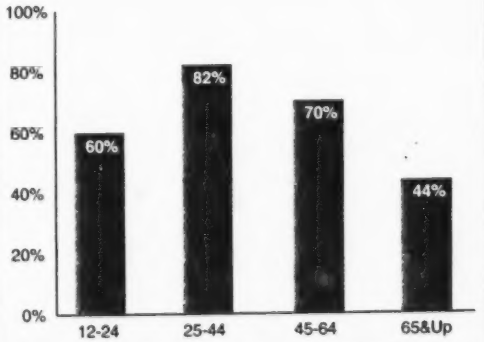
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.6
Proportion of Population Physically Inactive Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

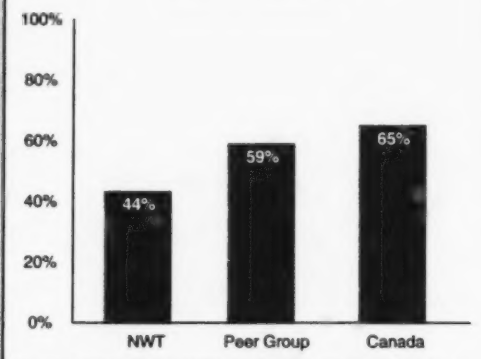
Figure 4.7
Consumed Alcohol in the Last Year by Age NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

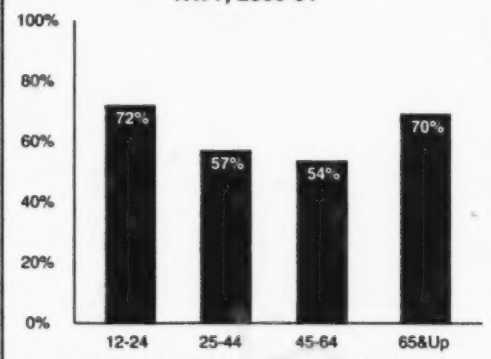
35 Three measures of alcohol consumption are used since it is often difficult to measure alcohol consumption in a meaningful manner with one measure. Consuming alcohol on regular basis is not an indication of an alcohol problem, nor is the irregular consumption of alcohol an indication of responsible drinking.

Figure 4.8
Consumed Alcohol in the Last Year
Seniors, 2000-01



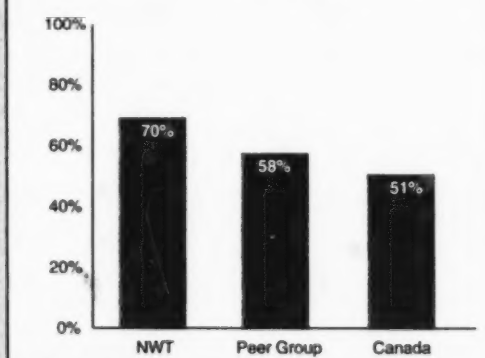
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.9
Consumed Alcohol Less Than Once a Week by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.10
Consumed Alcohol Less Than Once a Week
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.8 shows that NWT seniors were less likely to drink alcohol when compared to seniors in the peer group or seniors in Canada. These differences in alcohol abstention are statistically significant.

Figure 4.9[36] shows the proportion of drinkers who consume alcohol less than once a week. After youth (age 12 to 24), seniors were less likely to consume alcohol on a weekly basis. The results for seniors are not statistically significant relative to the results for the other age groups.

Figure 4.10 shows the proportion of the senior drinkers in the NWT, peer group, and Canada who consume alcohol less than once a week. There is not a significant difference between levels for NWT seniors, and those of seniors in the peer group and seniors in Canada.

A relatively good measure of alcohol abuse is the frequency people drink more than five drinks on at least one occasion. Consuming five or more drinks on one occasion is a potential indication of binge drinking. Because of small sample sizes in NWT data, the results for this indicator must be reversed to profile senior drinkers (Figures 4.11 and 4.12).

36 CCH Survey results shown in figures 4.9 to 4.12 only include people who consumed alcohol in the last 12 months.

Figure 4.11 shows that seniors were the least likely to binge drink. Youth and young adults were most likely to binge drink.

Figure 4.12 shows that while most seniors in the NWT avoid binge drinking, not as many avoid it when compared to the peer group or Canada. Eighty percent of seniors in the peer group avoided binge drinking, while 87% of Canadian seniors also avoided binge drinking. There is a statistically significant difference between NWT and Canadian seniors, but not between NWT and peer group seniors.

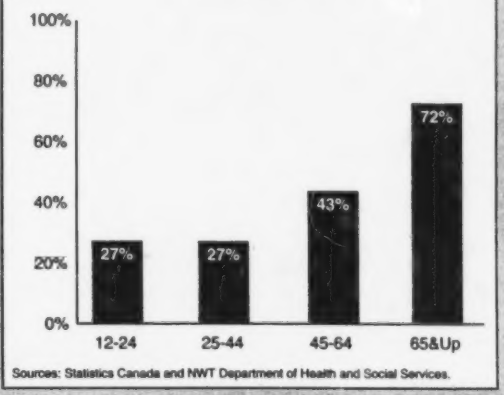
Tobacco Use

Tobacco use is directly related to health status, as it is a major cause of illness and death. Tobacco use is responsible for "*at least 85% of cases of lung cancer and a major cause of cancers of the mouth, throat, bladder and esophagus. It is also a major risk factor for cancer of the kidney, pancreas and cervix. Smoking is the leading cause of all pulmonary disease including emphysema and chronic bronchitis. It increases a person's risk of developing heart disease...stroke, diabetes mellitus ... and various other diseases and conditions.*".[37]

In the NWT, smoking rates are much higher than the national rates for all age groups, including seniors. It is not surprising that a greater proportion of NWT seniors suffer from respiratory illness and lung cancer than seniors nationally (See Chapters 6 and 7).

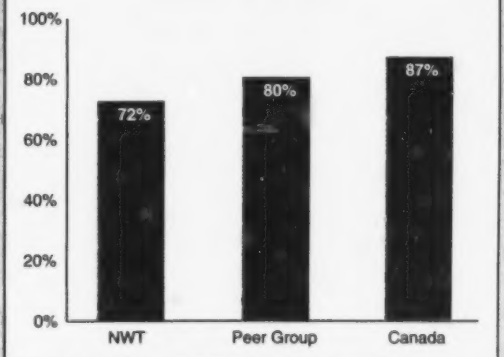
According to the *1999 NWT Labour Force Survey*, 30% of seniors age 65 and up were current smokers compared to 12% for seniors nationally. It is likely that these seniors have been smoking for most of their adult life as few smokers report starting after age 19.[38] It is interesting to note that while only 12% of Canadian seniors smoke, a large proportion of them (41%) reported being former smokers.[39]

Figure 4.11
Avoided Binge Drinking by Age
NWT, 2000-01



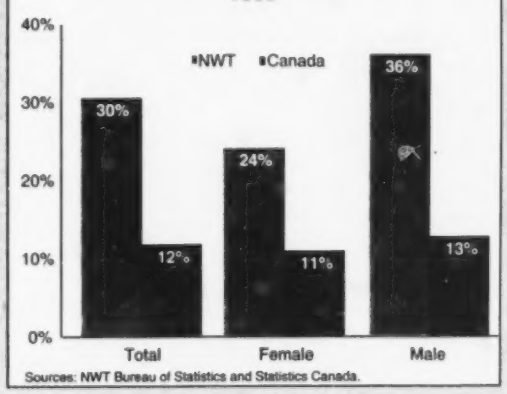
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 4.12
Avoided Binge Drinking
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

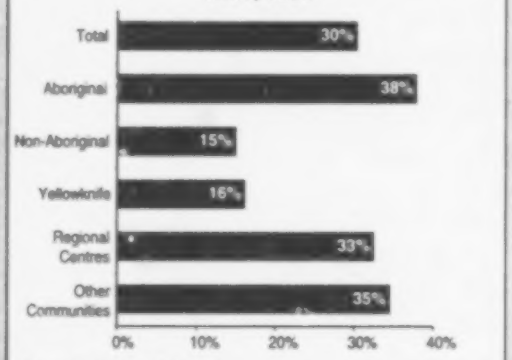
Figure 4.13
Proportion of Seniors
who are Current Smokers
1999



Sources: NWT Bureau of Statistics and Statistics Canada.

37 NWT Department of Health and Social Services, *The Facts About Smoking in the Northwest Territories*, p. 1.
38 NWT Bureau of Statistics and Statistics Canada, *1994/95 National Population Health Survey*.
39 Statistics Canada, *1999 Canadian Tobacco Use Survey*.

Figure 4.14
Proportion of Current Smokers
Seniors by Various Characteristics
NWT, 1999



Source: NWT Bureau of Statistics.

As has been found for the adult population in general, a higher proportion of senior smokers were men, Aboriginal, and lived outside of Yellowknife. As seen in Figure 4.14, the proportion of Aboriginal smokers (38%) was over double the proportion of non-Aboriginal smokers (15%). And, the rate of smoking among seniors in communities outside of Yellowknife was 33% or greater compared to 16% for Yellowknife.

There is not enough data to suggest that smoking rates among seniors in the NWT is going down. However, there is some potential for smoking rates to decline over the next two decades for two demographic reasons:

- the proportion of non-Aboriginal seniors is growing faster than Aboriginal seniors, and
- the proportion of seniors in Yellowknife is projected to grow faster than the proportion of seniors in other communities.

Both non-Aboriginal seniors and seniors living in Yellowknife have much lower smoking rates than Aboriginal seniors and seniors living elsewhere in the NWT.

Health Status and Well-Being

How people feel about their health or well-being can greatly influence their overall health. It is important to note that people who suffer from illnesses, injuries or disabilities can still be relatively happy, while others can be free from disease but can still be depressed or exhibit negativity toward their existence.

In this section we examine subjective or self-assessed health status, mortality and morbidity (illness or injury). Morbidity is an objective measure of health status that examines what people are sick with, as opposed to how they became sick (i.e. determinants of health) or how they feel about their health and well-being. Life expectancy and mortality (what people die from) provide for relatively objective measures of the health status for a given population and enables comparisons to other populations.

A large number of measures on self-assessed and subjective health are presented: overall health, levels of self-esteem, probability of depression, functional health, ability to deal with life's daily tasks, and existence of chronic health problems.

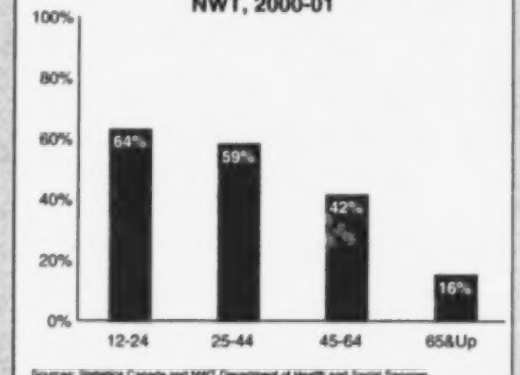
Chapter 5
Subjective Health Status

As the title of this chapter suggests, the information for these indicators is based on the opinion of the individuals surveyed. For this reason, one person's concept of excellent health, no matter how well defined, will not be exactly the same as another person's concept.

The source of data for this chapter is the 2000-01 CCH Survey. The survey results on NWT seniors are based on a small sample of the NWT population age 65 and over. Readers should not draw strong conclusions solely from one or two measures.[40]

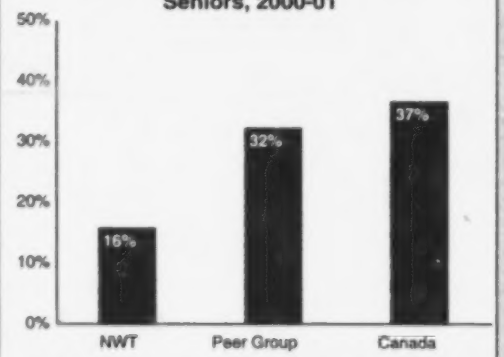
40 See Appendix 2 for details on statistical significance.

Figure 5.1
Proportion of Population Reporting Excellent or Very Good Health by Age
NWT, 2000-01



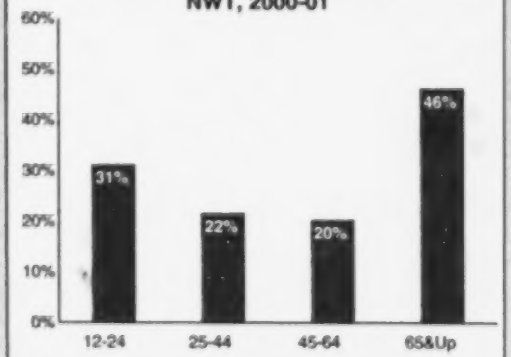
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.2
Proportion of Population Reporting Excellent or Very Good Health
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.3
Proportion of Population with a Low Sense of Mastery by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Self-Rated Health Status

Research indicates that self-rated health is a useful and surprisingly accurate indicator of population health status, as it correlates strongly with several 'objective' measures of health status.[41]

Participants in the 2000/2001 CCH Survey were asked to rate their overall health as: excellent, very good, good, fair or poor.

Figure 5.1 shows the proportion of the NWT population by age who reported their health to be either 'excellent' or 'very good.' There is a large statistically significant difference in the responses of different age groups, with youth (12 to 24 years) reporting the highest response of excellent or very good health, and seniors (65 and up) with the lowest response.

As people age and chronic conditions increase, it is not surprising that health declines. Nevertheless, fewer seniors (16%) in the NWT reported having excellent or very good health than did those seniors in the peer group (32%) and nationally (Figure 5.2). The differences between the NWT and the peer group, as well as the NWT and Canada, are statistically significant.

Psychological Well-Being[42]

Psychological well-being is another measure of positive health. Well-being and life satisfaction are important elements in the overall concept of quality of life. As the *Report on the Health of Canadians* pointed out:

"Well-being, or positive health, can be defined as consisting of those physical, mental, and social attributes that permit the individual to cope successfully with challenges to health and functioning."[43]

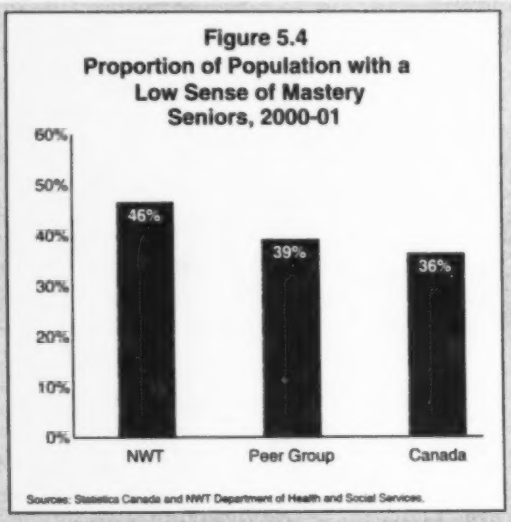
41 *Second Report on the Health of Canadians: Technical Appendix*, (Health Canada, 1999).
42 Both mastery and self-esteem survey data are based on a series of questions, and "...should not be interpreted as having any clinical significance" *Statistical Report on the Health of Canadians* (Health Canada, 1999), p 221.
43 *Report on the Health of Canadians: Technical Appendix*, (Health Canada, 1996), p. 238.

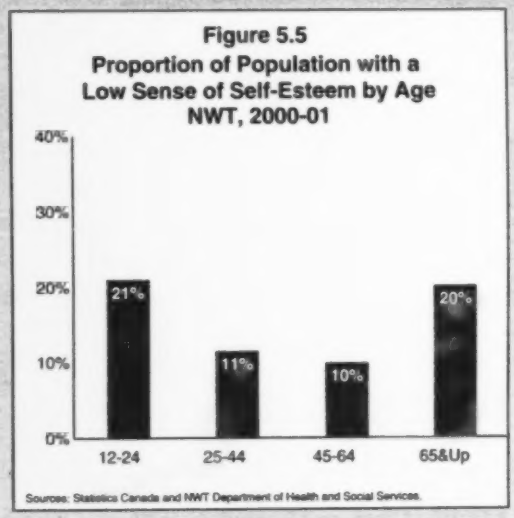
The 2000-01 CCH Survey asked a series of questions with the intent to get at the level of mastery (control) people felt they had over different aspects of their lives. The survey revealed that 46% of NWT seniors had a low sense of mastery[44] (Figure 5.3) and that they had about the same sense of control with seniors nationally or a comparable peer group (Figure 5.4; differences were not statistically significant).

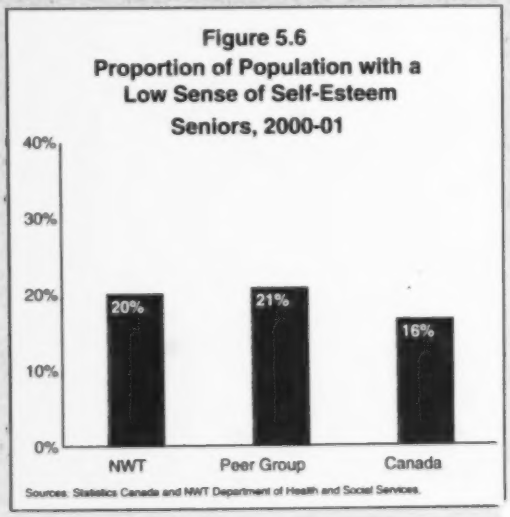
Figure 5.5 provides a break down by age group of low self-esteem levels in the NWT population.[45] The numbers vary and would suggest that youth (12 to 24) and seniors have lower self-esteem; however, the numbers are based on small sample sizes and differences are not statistically significant. These levels were similar to those reported for the NWT peer group and seniors nationally (Figure 5.6)

Risk of Depression

Depression is a leading form of mental illness, often characterized by feelings of profound sadness and a sense of helplessness and hopelessness. The 2000-2001 CCH Survey measured the extent of depression by asking a series of questions that estimated the probability that a person would be diagnosed with depression if seen by a doctor.[46]

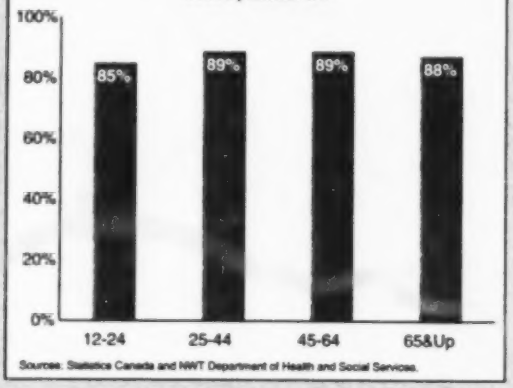






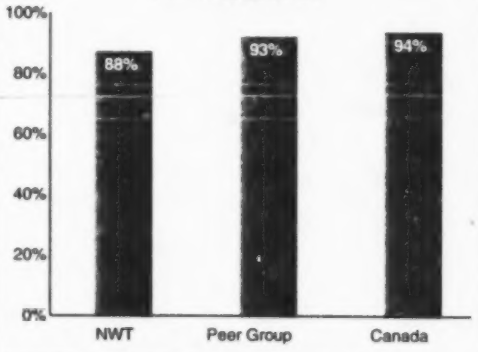
44 Low sense of mastery is defined as scoring less than 18 on a 28-point scale.
45 Low self-esteem is defined as scoring less than 18 on a 24 point scale.
46 *Statistical Report on the Health of Canadians* (Health Canada, 1999), p 292.

Figure 5.7
Proportion of Population with No Risk of Depression by Age
NWT, 2000-01



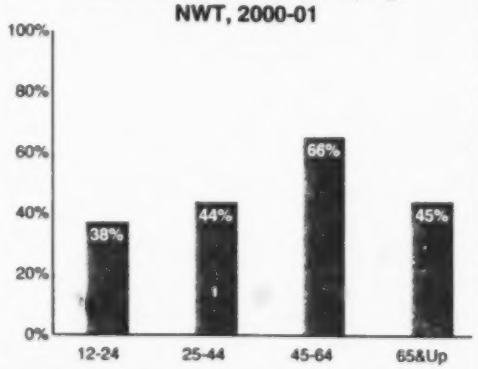
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.8
Proportion of Population with No Risk of Depression
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.9
Proportion of Population with Very Good Functional Health Status by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

As seen in Figure 5.7, over 85% of each age group had no risk of depression, and small differences in these numbers were not significantly different.

Although the 88% no-risk level for NWT seniors appears to be lower than values reported for the peer group (93%) and seniors nationally (94%), these numbers are not statistically different. (Figure 5.8)

It is important to realize that this measure of depression is based on a small sample of the NWT senior population. Depression can affect some seniors more than others, such as those living in residential care versus those living independently. Unfortunately, the CCH Survey in the NWT does not allow for greater coverage of the age 65 and over group.

Functional Health Status

Functional health status is another indicator of overall health that considers eight attributes: vision, hearing, speech, mobility (ability to get around), dexterity (use of hands and fingers), cognition (memory and thinking), emotion (feelings), and pain and discomfort. Functional health status measures a person's overall ability to perform daily tasks.

Figure 5.9 shows by age group the percentage of the NWT population with very good functional health status. With the exception of the age group age 45 to 64, there was not a significant difference between levels reported for the senior population and younger age groups.

There were slight differences between the NWT seniors and peer group seniors, as well as seniors nationally. Figure 5.10 shows that 45% of NWT seniors were found to have very good functional health status compared to 53% of seniors in the NWT peer group and 59% of seniors in Canada.

The difference between the NWT and the peer group is insignificant, but the difference between the NWT and Canada is significant.

Long-Term Activity Limitations and Chronic Health Problems[47]

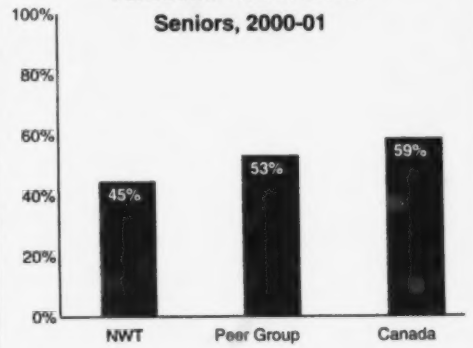
Limitations in the kind and amount of activities due to long-term physical or mental conditions provides another measure of heath status and is closely related to quality of life.

The 2000-01 CCH Survey asked people whether or not their lives were impacted by one or more health problems, and to what degree (i.e. often, sometimes or never). The CCH Survey also asked people if they needed help with basic tasks of life, and whether they suffered from chronic health problems.

Figure 5.11[48] shows that seniors were most likely to report that their lives were often impacted by a health problem. This is not surprising as general health status declines with age (see Figure 5.1), and the proportion of the population with a chronic condition increases with age (see Figure 5.15).

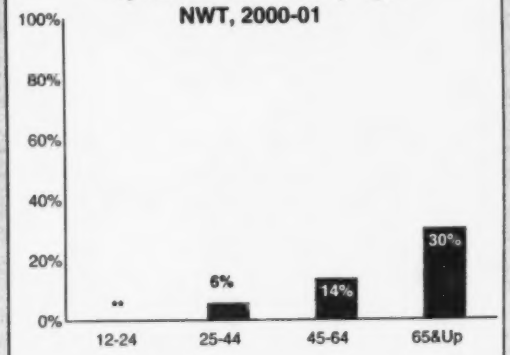
Figure 5.12 shows that NWT seniors (30%) were slightly more likely to report being impacted by health problems than their peers (25%) and nationally (22%), but these differences are insignificant.

Figure 5.10
Proportion of Population with Very Good Functional Health Status
Seniors, 2000-01



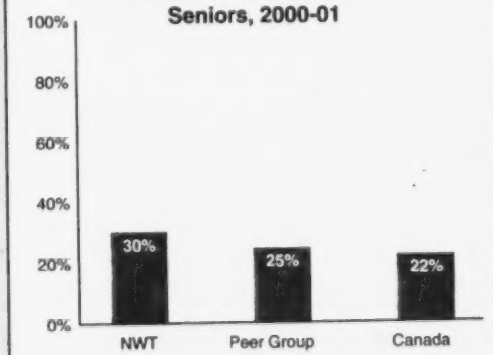
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.11
Proportion of Population Often Impacted by Health Problems by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

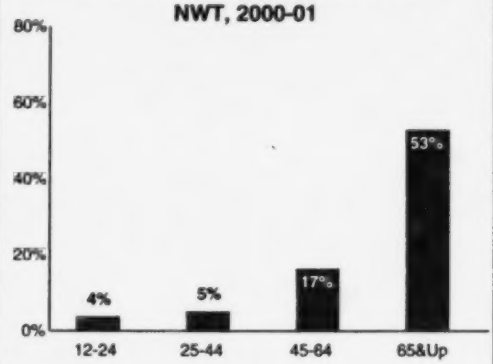
Figure 5.12
Proportion of Population Often Impacted by Health Problems
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

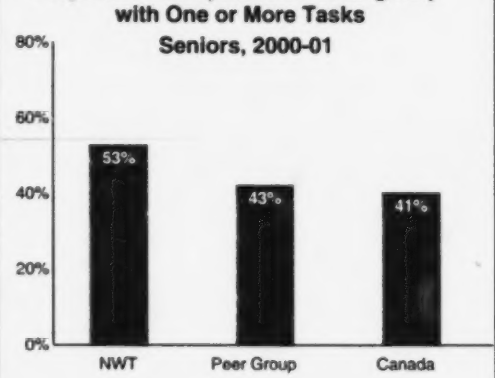
47 When a person reports having a long-term activity limitation or chronic health problem, no attempt has been made to have their statement verified.
48 Data for 12 to 24 year olds suppressed due to a small sample size.

Figure 5.13
Proportion of Population Needing Help with One or More Tasks by Age
NWT, 2000-01



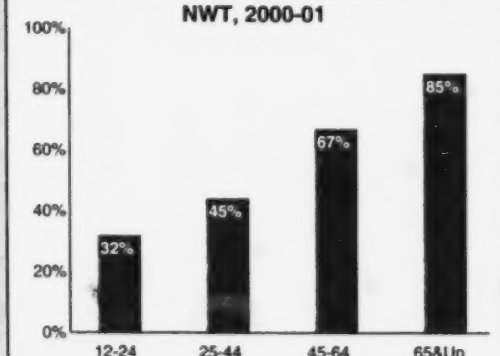
Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.14
Proportion of Population Needing Help with One or More Tasks
Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.15
Proportion of Population Reporting One or More Chronic Health Problems by Age
NWT, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 5.13 shows by age group the proportion of the NWT population needing help with at least one task.[49] This is another indicator which is influenced by age, with 53% of NWT seniors needing help with one or more tasks of daily life, compared to 5% or less for those under 45.

NWT seniors were slightly (but not significantly) more likely to require assistance with a daily task than the seniors in the peer group (Figure 5.14), but were significantly more dependent than Canadian seniors.

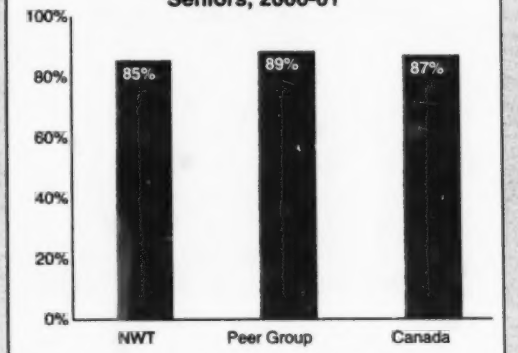
Figure 5.15 shows by age group the proportion of the NWT population that reported having one or more chronic health problems.[50] This indicator is strongly correlated with age, as 85% of seniors reported having a chronic condition, compared to 67% of the population age 45 to 64, 45% age 25 to 44, and 32% age 12 to 24.

49 A task consists of such daily or regular activities as shopping, housework, personal care or preparing meals.
50 Chronic problems included a wide range of conditions from allergies to Alzheimer's Disease.

Figure 5.16 indicates approximately the same proportion of seniors, 85 to 89%, in all three geographic areas reported having one or more chronic problems.

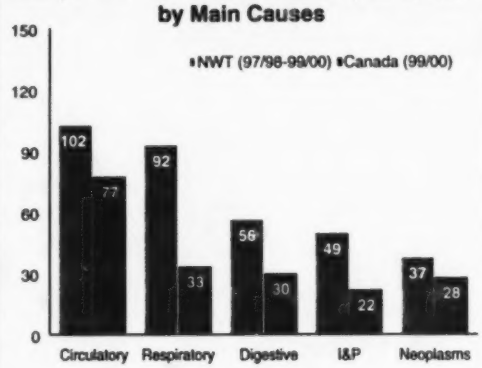
The findings in this chapter indicate that while seniors in the NWT are living longer (see Chapter 7), a large percentage of elders are experiencing some health problems. This percentage is often larger than those reported for the peer group of a similar region and in Canada as a whole.

Figure 5.16
Proportion of Population Reporting One or More Chronic Health Problems Seniors, 2000-01



Sources: Statistics Canada and NWT Department of Health and Social Services.

Figure 6.1
Hospitalization Rate of Seniors (Per 1,000) by Main Causes



Sources: NWT H&SS, CIHI, NWT BSTAT and Statistics Canada.

Chapter 6
Morbidity

In contrast to Chapter 5, which explored subjective measures of health status, this chapter explores a more objective measure — morbidity (illness and injury). Morbidity will be explored through an examination of the top reasons for hospitalization.[51] With the exception of cancer, hospitalization data are used in lieu of non-existent disease registries. Hospitalization provides an indication of the most severe forms of an illness, short of death. Finally, a series of special topics are explored: cancer, tuberculosis and diabetes.

General

Figure 6.1 compares the top five reasons for hospitalizations of NWT seniors to the rates for seniors nationally.[52] The NWT rates are an average annual rate between 1997/98 to 1999/00, while the Canadian rate is for 1999/00. The three year NWT average is used to smooth out the year to year variances that occur when measuring small populations.

Diseases of the circulatory system represent the top reason for hospitalization of NWT seniors (102 hospitalizations per 1,000 versus 77 per 1,000 nationally). Respiratory diseases were next at 92 hospitalizations per 1,000, nearly three times the national average at 33 per 1,000. It is important to note that within the senior population, the top two causes of hospitalization are also the top two causes of death (See Chapter 7).[53]

Digestive diseases also figured more prominently amongst seniors in the NWT at 56 hospitalizations per 1,000 compared to 30 nationally. Injury and poisoning was over double the national rate at 49 versus 22 per 1,000. Finally, neoplasms (cancerous and non-cancerous growths) were higher in the NWT at 37 per 1,000 versus 28 per 1,000 nationally.

For NWT seniors, the five conditions displayed in Figure 6.1 represented 69% of hospitalizations where a condition was known. These are also the top five reasons for hospitalization for each sex, though the order differs.

51 See Appendix 2 for details on the limitations of hospitalization as a comparative measure.
52 Age 65 and up.
53 It is important to realize that hospitalizations do not equal unique individuals, as a person can be hospitalized more than once in a year.

Senior women in the NWT were more likely to be hospitalized for all five conditions shown (Figure 6.2). The hospitalization rate for senior women due to respiratory diseases was 84 per 1,000, compared to 28 per 1,000 nationally.

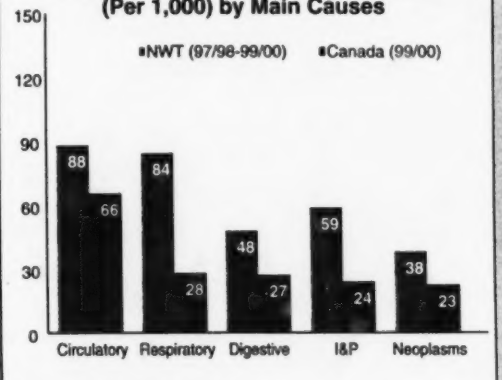
With the exception of neoplasms, the rate of hospitalization for senior men in the NWT was higher than the national rate (the neoplasm rate was statistically the same, See Figure 6.3). The rate of hospitalization for senior males in the NWT for respiratory diseases was much higher than the rate nationally.

Circulatory Diseases

For seniors, the main conditions for hospitalization due to circulatory diseases included heart conditions and strokes (ischemic heart disease, heart failure and cardiac dysrhythmias). Heart conditions include ischemic heart disease, heart failure and cardiac dysrhythmias. Together these conditions accounted for around two-thirds of all hospitalizations due to circulatory diseases (Figure 6.4).

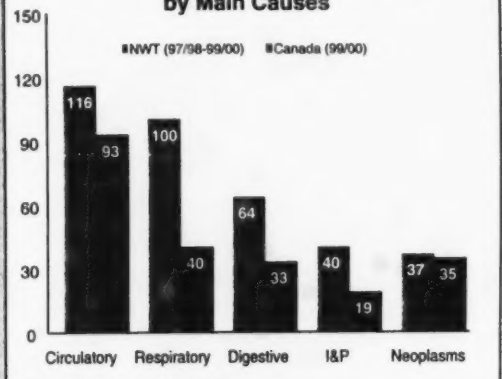
Circulatory diseases increase with age, and given that the NWT population is aging, these diseases will become more common. Currently, circulatory diseases are approximately seventh in terms of demand on health care resources. By 2020, spending of health care resources on circulatory diseases is likely to move up to second for all ages.[54]

Figure 6.2
Hospitalization Rate of Senior Women (Per 1,000) by Main Causes



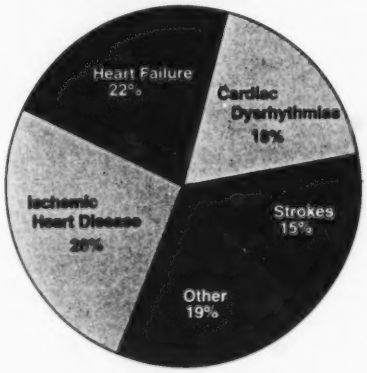
Sources: NWT H&SS, CIHI, NWT BSTAT and Statistics Canada.

Figure 6.3
Hospitalization Rate of Senior Men (Per 1,000) by Main Causes



Sources: NWT H&SS, CIHI, NWT BSTAT and Statistics Canada.

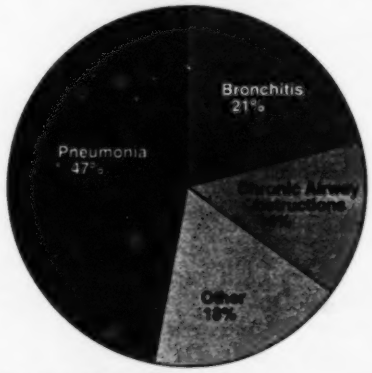
Figure 6.4
Hospitalizations for Circulatory Diseases 1997/98 to 1999/00



Source: Department of Health and Social Services.

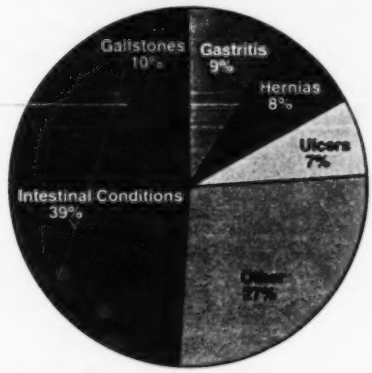
54 See NWT Department of Health and Social Services, *The NWT Health Services Report, 2000*, p. 48.

Figure 6.5
Hospitalizations for Respiratory Diseases
1997/98 to 1999/00



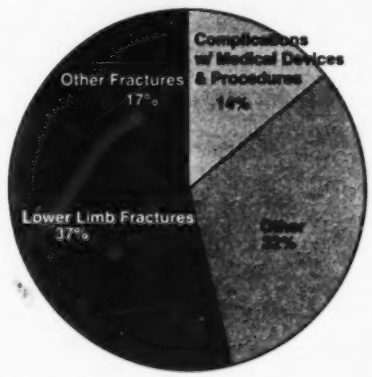
Source: Department of Health and Social Services.

Figure 6.6
Hospitalizations for Digestive Diseases
1997/98 to 1999/00



Source: Department of Health and Social Services.

Figure 6.7
Hospitalizations for Injuries
1997/98 to 1999/00



Source: Department of Health and Social Services.

Respiratory Diseases

The most prominent reasons for hospitalization due to a respiratory disease were pneumonia and chronic bronchitis. As seen in Figure 6.5, various forms of pneumonia accounted for almost half of all respiratory related hospitalizations. Bronchitis (mainly chronic) accounted for a further 21% of hospitalizations, followed by chronic airway obstructions at 14%.

Digestive Diseases

Diseases of the digestive system include conditions with the mouth (teeth, tongue and jaw), the stomach area (esophagus, stomach and duodenum), other digestive related organs (gall bladder, kidneys and liver) and the intestinal area (small and large intestines, colon and anus).

As seen in Figure 6.6 most hospitalizations for NWT seniors were due to intestinal conditions, including gastrointestinal bleeding, Crohn's disease, noninfectious enteritis, colitis and intestinal obstructions. Gallstones were next at 10%, followed by gastritis at 9%, hernias (abdominal) at 8%, and various ulcers at 7%.

Injuries and Poisonings

A detailed report on injuries in the NWT is scheduled for release in 2003. The injury report will examine where and how the injuries happen. Currently, data allows only for an analysis of the physical outcome of the injury (i.e., broken hip or fractured skull).

As seen in Figure 6.7, fractures resulted in 54% of injury-related hospitalizations for seniors.[55] Most of these fractures were to the lower limbs (leg, ankle, foot, etc). Complications of medical procedures and problems associated with medical device implants, prosthetics, tissue graphs and transplants were responsible for 14% of injury-related hospitalizations. The remaining third of injury-related hospitalizations include a wide number of injury types to various body parts.

55 Less than one percent of all hospitalizations under this general category were related to a poisoning.

Cancers

Data from the NWT Cancer Registry has been used to examine cancer incidence in the senior population.[56] It is important to realize that there were only 245 cases of cancer between 1992 and 2000 in the NWT amongst people age 65 and over. While this is over a third of cancers for all ages, it is important to be careful when drawing conclusions from the following data and discussion.

Figure 6.8 shows by age group the incidence of cancer for both the NWT and Canada. Nine-year averages are used to profile the NWT since the actual number of cases is very small each year and tends to fluctuate. As seen in Figure 6.8, cancer incidence increases dramatically with age in both the NWT and Canada. The difference between the NWT and Canadian rates are statistically insignificant.

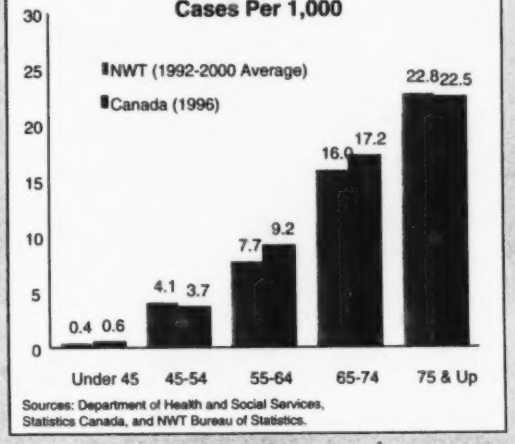
Figure 6.9 shows the incidence of the top three types of cancer in senior women in both the NWT and Canada. Colorectal, lung and breast are the top three cancers in the NWT presented in decreasing order of magnitude. In Canada, the top three cancers are the same but occur in the opposite order with breast cancer first, followed by lung cancer and then colorectal cancer. When the rates for each cancer type are examined, senior women have significantly higher rates for colorectal and lung cancers when compared to the national rates. The difference in rates for breast cancer between the NWT and Canada is not significantly significant.

In total these three cancer types account for approximately 64% of all cancers in women age 65 and over in the NWT compared to just over 50% nationally.

Figure 6.10 shows the incidence of the top three types of cancer in senior men in both the NWT and Canada. In the NWT, colorectal, followed by lung and then prostate cancer account for approximately 67% of all cancer cases afflicting senior men. For Canada the order is reversed, with the top three account for approximately 64% of all cancer cases in senior men.

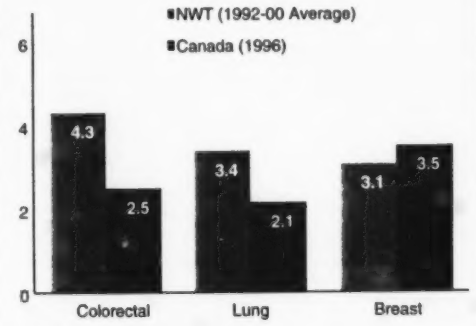
The NWT has a higher rate of colorectal cancer (5.1 cases per 1,000) compared to national rate of 3.5 cases per 1,000 for

Figure 6.8
Cancer by Age
Cases Per 1,000



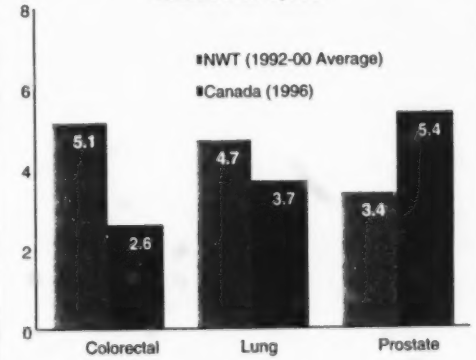
Sources: Department of Health and Social Services, Statistics Canada, and NWT Bureau of Statistics.

Figure 6.9
Top Three Cancers - Senior Women
Cases Per 1,000



Sources: Department of Health and Social Services, Statistics Canada, and NWT Bureau of Statistics.

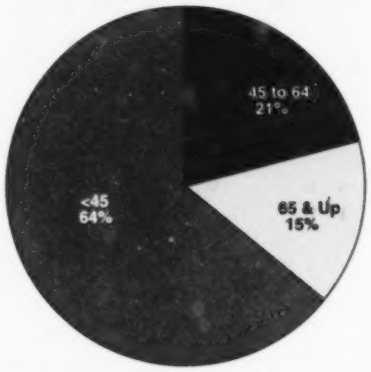
Figure 6.10
Top Three Cancers - Senior Men
Cases Per 1,000



Sources: Department of Health and Social Services, Statistics Canada, and NWT Bureau of Statistics.

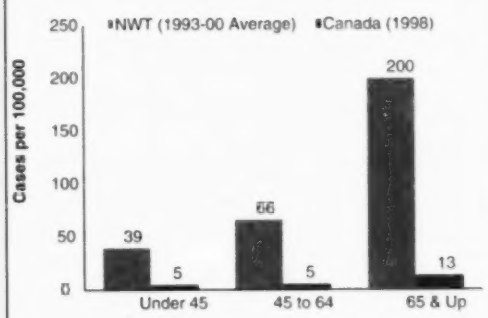
56 A cancer report is scheduled for public release in 2003.

Figure 6.11
TB by Age
Cummulative Cases 1993 to 2000



Source: Department of Health and Social Services.

Figure 6.12
TB Incidence by Age
Cases per 100,000



Sources: Department of Health and Social Services, NWT Bureau of Statistics, and Health Canada.

senior men. Regarding lung cancer in senior men, there was not any significant difference between the NWT and Canada. The prostate cancer rate is significantly lower in the NWT at 3.4 cases per 1,000 versus 7.3 cases per 1,000 nationally.[57]

The incidence of certain cancer is influenced by a number of factors: genetic history, lifestyle and environment. Poor diet (i.e. one low in green vegetables, low in fibre, high in fried fatty foods) is a lifestyle factor that increases the risk of colorectal cancer. Smoking and prolonged exposure to second hand tobacco smoke is a main cause of lung cancer.

Tuberculosis

Tuberculosis (TB) is an infectious disease that is found in all age groups but is disproportionately higher in seniors. During their lifetime, people may be exposed to TB. Exposure to TB may result in an active infection, or as is more often the case, a latent infection. Many seniors today were infected with mycobacterium tuberculosis during their younger adult years, but have never fallen ill with the condition or did not receive the complete treatment (according to today's standards). They have what is called "latent TB infection" (LTBI). *"The number of elders with untreated LTBI in the NWT may be as high as 40% in some communities".*[58]

Seniors have had the largest number of years in which to be exposed to TB and their immune systems are weaker than younger people. *"The normal process of aging causes the immune system to gradually decline, placing many at risk for developing active TB from [either] ... a new infection or latent infection".*[59]

Between 1993 and 2000, there were a total of 163 cases of active TB in the NWT. Of these 163 cases, 24 were seniors, age 65 and up, representing 15% of the total number of TB cases or approximately four times the rate for the total population (Figure 6.11).

As seen in Figure 6.12, the average rate for seniors in the NWT (calculated using annual rates over seven years) is over fifteen

57 The age-standardized rate for colorectal cancer for the entire NWT male population is significantly higher than they are for Canada for the same time periods. The age-standardized rate for prostate cancer is significantly lower in the NWT than it is nationally, for all males combined. NWT Department of Health and Social Services, *Cancer Statistics: NWT 1992-2000* (May 2002, unpublished).
58 Cheryl Case, "TB - Focus on Seniors" in *Epi North*, Spring 2001, Vol. 13, No. 2, p. 10.
59 Ibid, p. 10.

times the national rate reported in 1998. It is important to keep in mind that the actual number of cases in the NWT is quite small, averaging three per year. Nonetheless, the NWT rate is significantly higher than the Canadian rate.

Diabetes

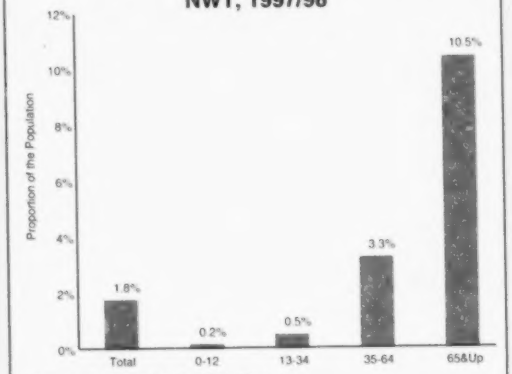
There are three types of diabetes: Type 1, Type 2 and gestational. Type 1 usually occurs before age 30, and is the type that affects about 10% of all diabetics. Type 2 generally begins after age 40, though it is on the increase in younger ages, and accounts for about 90% of all diabetics. Gestational diabetes occurs during pregnancy and ends after giving birth. Nevertheless, 40 to 50% of women with gestational diabetes will go on to develop Type 2 diabetes within the next 15 years.[60]

Type 2 is of greatest concern for the NWT population. Generally, Type 2 diabetics are overweight or obese and have a sedentary or inactive lifestyle. A family history of diabetes increases the risk of getting the disease. Aboriginal populations in southern Canada and the United States have higher prevalence rates of diabetes than the general population. This trend is expected in the NWT if people are not making health lifestyle and eating choices.[61]

The NWT is participating in a project to develop a national diabetes registry.[62] Currently, data required to determine the rate of diabetes in the NWT are incomplete. A 1997/98 study of diabetes in the NWT does provide a snapshot of the scope of the problem in the senior population.

Figure 6.13 shows the proportion of the NWT population with diabetes as of 1997/98.[63] These numbers are estimates based on one year of data only, and have been reworked with subsequent changes to population estimates. The National Diabetes Registry (once complete) will provide NWT diabetes rates that can be compared with other provincial and territorial jurisdictions. Even with this data, there can be one undiagnosed case for every two that are diagnosed.[64] There is an expectation that rates generated from the registry will show higher prevalence rates

Figure 6.13
Estimated Population with Diabetes by Age
NWT, 1997/98



Sources: Department of Health and Social Services, NWT Bureau of Statistics, and Health Canada

60 See Elsie DeRoose, et al. "Gestational Diabetes Mellitus" in *Epi North*, Fall 2001, Vol. 13, Issue 4, p. 12.
61 Joyce Bourne, "Diabetes Surveillance in the NWT" in *Epi North*, Fall 2001, Vol. 13, Issue 4, p. 8.
62 The national diabetes registry is one of the goals of the National Diabetes Surveillance System - part of the Canadian Diabetes Strategy.
63 The data comes from Daojun Mo, et al., "Profile of Prevalent Diabetes Mellitus in Fiscal Year 1997/98 in the NWT and Nunavut" in *Epi North*, Fall 1999, Vol. 11, Issue 3, p. 2.
64 Ibid, p.3.

than the ones shown in Figure 6.13.

Analysis by ethnicity was done for the entire NWT population using 1997/98 data. From the 1997/98 data, Inuit (0.9%) and Dene (1.5%) populations had proportionately smaller numbers of diabetics when compared to the non-Aboriginal (2.2%) population.[65] Given that diabetes can take many years to develop, residency can be a factor in the likelihood of becoming a diabetic.

The Aboriginal population, concentrated outside of Yellowknife and regional centres, is likely to have more of a traditional (healthy) diet and lifestyle relative to the non-Aboriginal population concentrated in Yellowknife and regional centres. People living most of their lives in larger communities have historically had greater access to a diet characterized by highly processed, packaged, and fast foods. They also tend to have a less active, less traditional lifestyle.

With the aging population, it is likely that the overall rates of diabetes will increase in NWT over the next 10 to 20 years. There is an anticipation that much of this increase will occur in the Aboriginal population. The Aboriginal senior population of tomorrow will likely be significantly different in many aspects than their peers today. Diets rich in traditional foods are likely to become less common for tomorrow's seniors as the use of Western foods increases throughout the NWT. Eating habits, like any habit, are increasingly harder to change as people age. Today, all people throughout the NWT have increased access to processed store-bought foods and fast foods (by plane). With fast foods especially, this ease of access is a relatively recent phenomenon.

65 Ibid. p 3.

Chapter 7
Life Expectancy and Mortality

Life Expectancy

Life expectancy at age 65 is a crude measure of health of the senior population. It is primarily based on death statistics, and does not take into account such factors as quality of life.

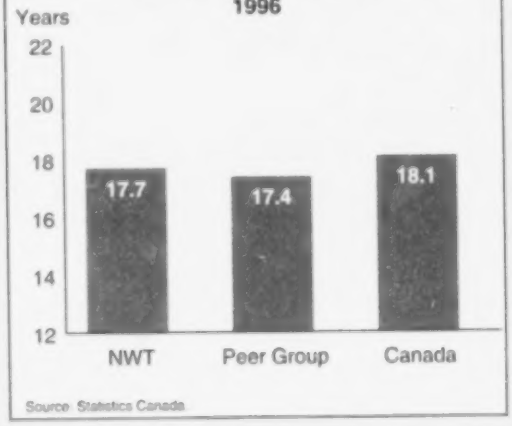
Statistics Canada has calculated life expectancy at age 65 for Canada, the provinces, the territories and health regions.[66] In 1996, an NWT resident reaching age 65 was expected to live approximately 17.7 more years compared to a peer group average of 17.4 years, and national average of 18.1 years (See Figure 7.1). These differences in life expectancy at age 65 are not statistically significant.

Figure 7.2 provides life expectancy at age 65 by sex. Although there appear to be differences between NWT, peer group and national data, these differences are not statistically significant. In addition, in the NWT, there is not a statistically significant difference in life expectancy between men and women. There are statistically significant differences between men and women in the peer group and nationally.

Life expectancy has been increasing nationally,[67] and appears to be increasing in the NWT as well. Figure 7.3 shows the life expectancy for seniors in the NWT over time. Since the life expectancy figures are based on small numbers for a given year, three-year averages have been used to smooth out yearly variances.[68]

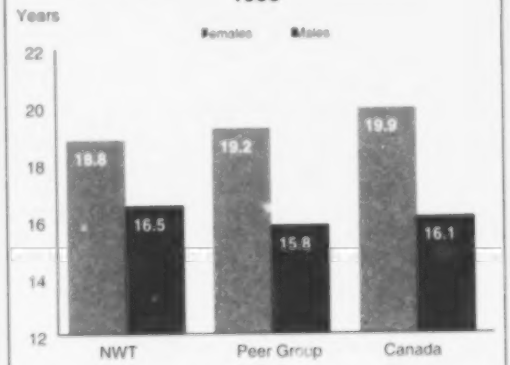
As seen in Figure 7.3, an NWT resident could be expected to live an average of 16.5 years in 1991-93. Between 1997-99, the NWT senior could be expected to live 17.1 years.

Figure 7.1
Life Expectancy at Age 65
1996



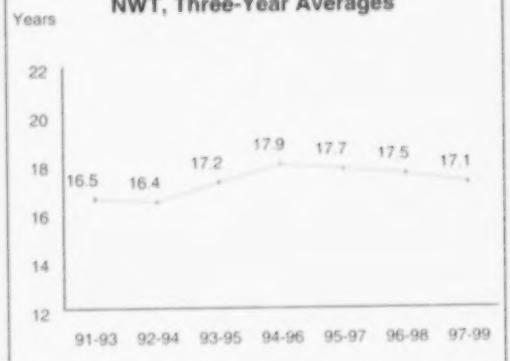
Source: Statistics Canada

Figure 7.2
Life Expectancy at Age 65 by Sex
1996



Source: Statistics Canada

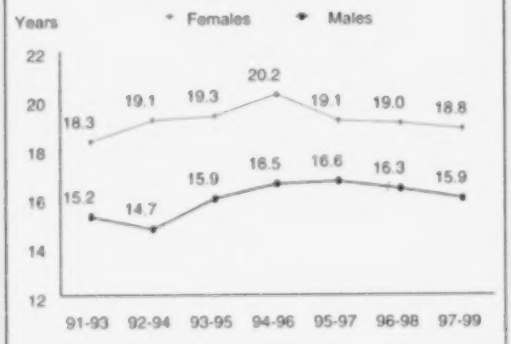
Figure 7.3
Life Expectancy at Age 65
NWT, Three-Year Averages



Source: Statistics Canada

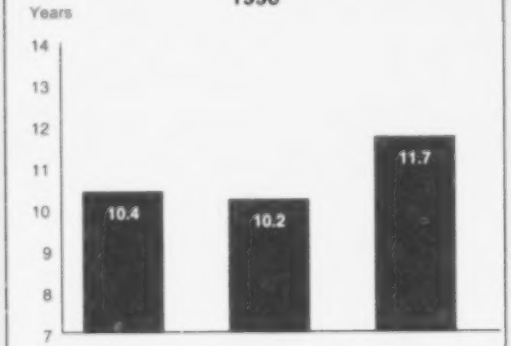
66 For Figures 8.1.1 and 8.1.2 Statistics Canada uses death records from three years (1995 to 1997) and takes the population estimate for the middle year (1996).
67 Nationally, life expectancy at age 65 increased from 13.3 years in 1931 to 18.4 years in 1996. Statistics Canada in Health Canada, *Canada's Seniors* (1999) No. 37.
68 Life expectancy in Figures 8.1.3 and 8.1.4 are calculated on a yearly basis, and then are turned into three-year averages.

Figure 7.4
Life Expectancy at Age 65
NWT, Three-Year Averages



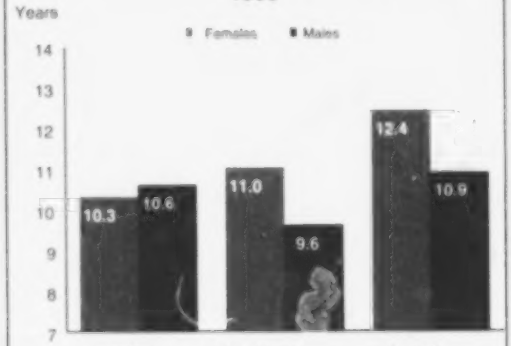
Source: Statistics Canada

Figure 7.5
Disability-Free Life Expectancy at Age 65
1996



Source: Statistics Canada

Figure 7.6
Disability-Free Life Expectancy at Age 65 by Sex
1996



Source: Statistics Canada

Figure 7.4 presents life expectancy based on three-year averages for senior women and senior men in the NWT. In 1991-93, the average life expectancy at age 65 was 18.3 years for women compared to 15.2 years for men. By 1997-99, the average life expectancy had increased marginally to 18.8 years for women and 15.9 years for men.

Life expectancy alone does not equate to quality of life. One measure that considers quality of life is disability-free life expectancy (DFLE). Statistics Canada has calculated DFLE at age 65 for Canada, the provinces, the territories and peer groups. DFLE is based on not only death statistics, but also information about activity limitations collected during the *1996 Statistics Canada Census.*

In 1996, a NWT resident reaching age 65 was expected to live approximately 10.4 years free of activity limitations compared to the peer group average 10.2 years and a national average of 11.7 years (Figure 7.5). The difference between the NWT and the peer group is not statistically significant but the difference between NWT and Canada is significant.

Figure 7.6 provides the disability-free life expectancy by sex. The apparent difference in DFLE between senior women in the NWT and the peer group is insignificant. However, the difference between senior women in the NWT and Canada is statistically significant. For senior men, there is neither a statistically significant difference between NWT and the peer group, nor one between the NWT and Canada. Finally, there is not a statistically significant difference in DFLE at age 65 between women and men in the NWT.

Death by Cause

There were just over 600 deaths of NWT residents age 65 and over between 1990 and 1998. For these seniors, three general causes account for most (74%) of these deaths: circulatory diseases, respiratory diseases and cancer. These three general conditions are responsible for 79% of deaths of seniors in Canada (1996).[69]

The following three charts provide the age-specific death rate for each of the top three causes of death for NWT and Canada. There are few statistically significant differences between the NWT and Canada for these death rates.

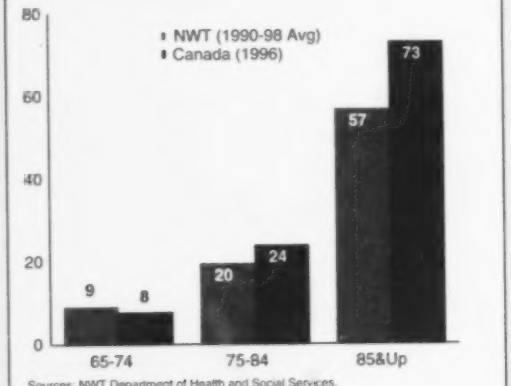
Figure 7.7 shows the rate per 1,000 people for death due to circulatory diseases. Death rates for circulatory diseases for ages 65 to 74 and 75 to 84 are approximately the same between the NWT and Canada. Yet, there is a statistically significant difference between the NWT and Canada for older seniors, 85 and up (57 per 1,000 versus 73 per 1,000).

Figure 7.8 shows the rate per 1,000 for deaths due to cancer. Death rates due to cancer across all three age groups are approximately the same between the NWT and Canada.

Figure 7.9 shows the rate per 1,000 for death due to respiratory diseases. The differences in death rates due to respiratory diseases are significantly higher in the NWT than in Canada for ages 65 to 74 and 85 and up, but are not significantly different for 75 to 84 year olds.

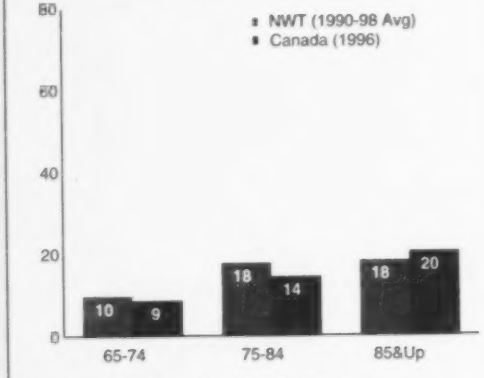
Given the small number of seniors deaths each year in the NWT, it is difficult to provide further detail on the causes of death other than what has been presented. However, the higher NWT death rates in some age categories for respiratory diseases may be due in part to the high smoking rates in the NWT (See Chapter 4).

Figure 7.7
Deaths per 1,000 due to Circulatory Diseases



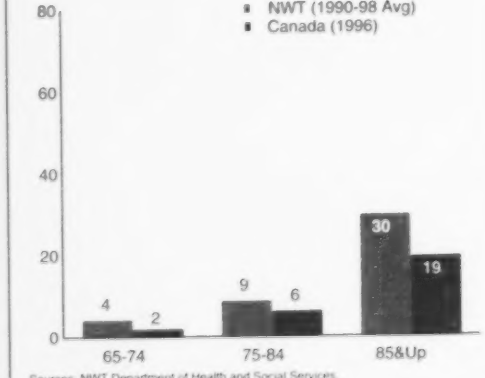
Sources: NWT Department of Health and Social Services, Statistics Canada and NWT Bureau of Statistics.

Figure 7.8
Deaths per 1,000 due to Cancer



Sources: NWT Department of Health and Social Services, Statistics Canada and NWT Bureau of Statistics.

Figure 7.9
Deaths per 1,000 due to Respiratory Diseases

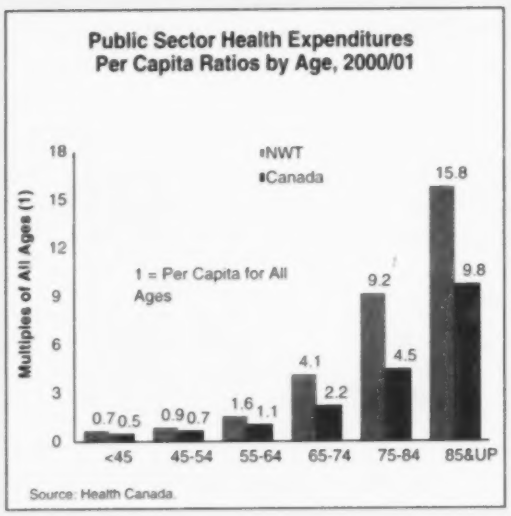


Sources: NWT Department of Health and Social Services, Statistics Canada and NWT Bureau of Statistics.

69 Circulatory diseases, cancer, and respiratory diseases were the top three causes of death for both sexes in both the NWT and Canada. In all cases, they accounted for well over 70% of deaths.

Service Utilization

Chart



As people age, they become more susceptible to illnesses such as heart disease, stroke, cancer, and pneumonia. In general, the older you are, the longer it takes to recover from an illness or an injury. Moreover, many of the diseases seniors suffer from are chronic. It is not surprising then that seniors use significantly more health services than the population as a whole.

The Canadian Institute of Actuaries states: "...that between 30 to 50% of total lifetime health care expenditures occur in the last six months of life."[71] Per capita use in both the NWT and Canada is highest among people over 65. However, this variation in use is magnified in the NWT, when compared to the Canadian average (See Chart). For example, NWT residents age 65 to 74 required 4.1 times the amount of health services on a per person basis, than the average for all ages combined. Nationally, this average is 2.2 times for people age 65 to 74 versus the entire population. The NWT ratio of public health expenditures on residents, age 75 to 84 was 9.2 times the average for all ages, compared to 4.5 times the same ratio nationally. And, for age 85 and up, the NWT ratio was 16 times the average for all ages compared to 10 times nationally.

The following three chapters profile the use of health services by seniors in terms of:

- hospitalization and the use of physician services – two of the larger contributors to health service costs;
- the use of medications by non-Aboriginal and Metis seniors; and
- the use of home care and long-term care – two programs primarily focused on the senior population.

Chapter 8
Health Service Utilization

This chapter examines the utilization of hospital and physician services. These health services account for the two largest pieces of the health budget pie – approximately 33% in 2001/02.[72] This chapter builds upon the information presented in *The NWT Health Services Report 2000.* That report profiled the use of health services by age but grouped all seniors together at age 65 and up. This chapter will look at the use of hospital and physician services in more detail within the senior population.

71 Canadian Institute of Actuaries, *Health Care in Canada: The Impact of Population Aging*, March 21, 2001, p.4.
72 GNWT, 2002-2003 *Main Estimates*

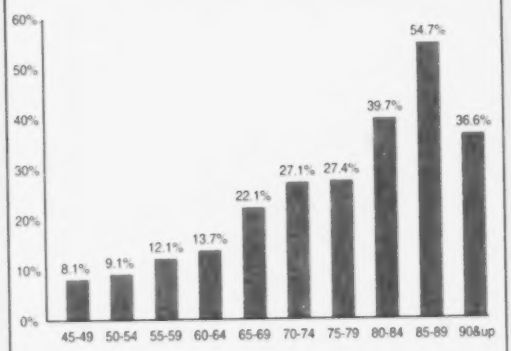
Hospitalization

A person's chance of being hospitalized is directly correlated to their age, among other factors. The older you are, the higher the chance you have of spending some time in a hospital bed. Figure 8.1 presents the proportion of the population hospitalized at least once per year by five-year age groups, starting at age 45.

The hospitalization rate measures the number of separations (or stays in hospitals) per 100,000 of the population. As seen in Figure 8.2, the NWT has a higher rate of hospitalizations for each age group than the national average, and the territorial hospitalization rate for seniors 65 to 74 is more than double that for Canada.[73]

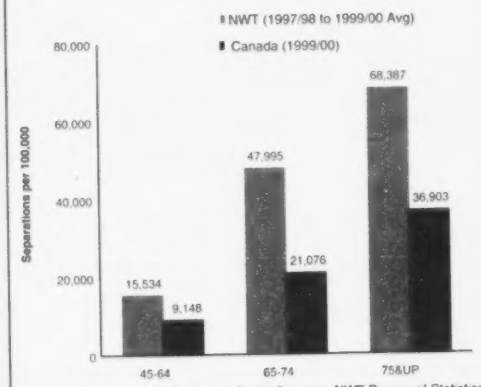
Not only does the chance of being hospitalized grow with age, the chance the hospital stay will be longer also increases. As seen in Figure 8.3, between age 45 to 54 and 85 and up the average length of stay nearly triples from approximately 5 to 15 days.

Figure 8.1
Percentage of the Population Hospitalized
1997/98 to 1999/00 Annual Average



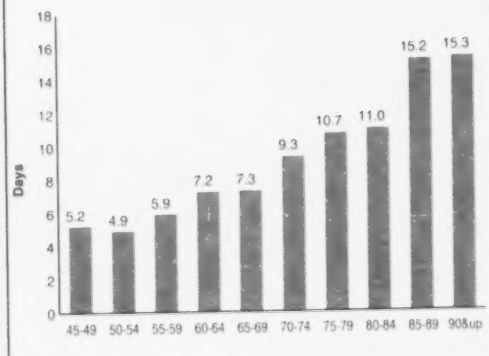
Sources: Department of Health and Social Services, and NWT Bureau of Statistics.

Figure 8.2
Hospitalization Rate per 100,000



Sources: Department of Health and Social Services, NWT Bureau of Statistics, and Canadian Institute for Health Information.

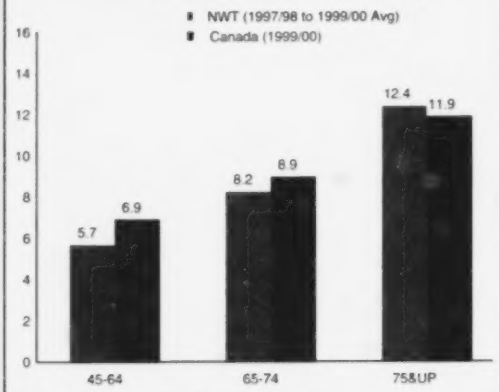
Figure 8.3
Average Length of a Hospital Stay
1997/98 to 1999/00



Source: Department of Health and Social Services.

73 See Appendix 2 for details on the limitations of hospitalization as a comparative measure.

Figure 8.4
Average Length of Hospital Stay



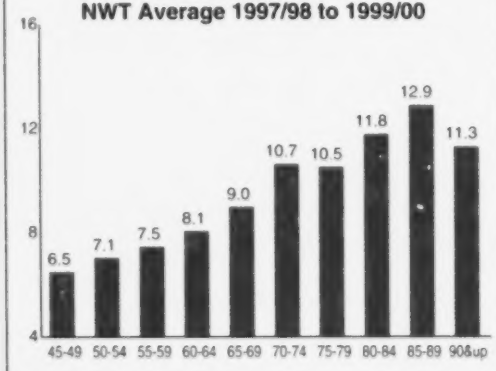
Sources: Department of Health and Social Services and Canadian Institute for Health Information.

Table 8.1
Average Length of Stay
(Bed Days)
NWT, 1994/95-96/97 to 1997/98-1999/00

	Three Year Averages				Change
Age	94-96	95-97	96-98	97-99	94-96 to 97-99
45-49	4.9	4.9	4.9	5.2	5.9%
50-54	6.1	5.5	5.0	4.9	-20.1%
55-59	7.7	7.1	6.2	5.9	-23.5%
60-64	8.0	8.0	7.6	7.2	-9.8%
65-69	7.8	7.4	7.2	7.3	-6.7%
70-74	11.6	10.3	9.0	9.3	-19.5%
75-79	8.9	9.3	10.4	10.7	21.0%
80-84	12.8	14.2	12.7	11.0	-14.1%
85-89	15.9	14.4	14.4	15.2	-4.6%
90&Up	12.4	14.0	14.9	15.3	23.9%

Note: Numbers are rounded to nearest 1/10th.
Source: Department of Health and Social Services.

Figure 8.5
Average Number of Physician Encounters Per Patient
NWT Average 1997/98 to 1999/00



Source: Department of Health and Social Services.

Unlike the variation in hospitalization rates between the NWT and Canada, the average length of stay is relatively similar. Figure 8.4 shows that NWT patients age 65 to 74 spend slightly less time in hospital than the national average. Patients age 75 and up spend slightly more time than the national average, at 12.4 versus 11.9 days per hospital stay. The average stay for all ages combined is shorter for NWT residents at 5 days compared to 7.1 days nationally.[74]

Over the last half of the 1990s, the average length of stay has decreased marginally for seniors. Table 8.1 displays changes in the average annual length of stay in three-year averages. After age 65, all age groups experienced decreases, with the exception of the 75 to 79 year olds, and those patients age 90 and over.

It is possible that the NWT's small numbers are responsible for these fluctuations despite the use of three-year averages. Another contributing factor may be the growing availability of home care services to help seniors spend a greater proportion of post-treatment recovery at home.

Physician Encounters

As shown in The *NWT Health Services Report 2000*, approximately 80% of the population sees a physician once a year.[75] For seniors, the proportion is over 95%. A larger difference by age is found when the average number of visits per patient is shown. As seen in Figure 8.5, the average number of patient visits increases from 6 to 7 a year for those in their forties and fifties, and increases from 11 to 12 visits a year for those in their eighties and nineties.

74 NWT data is an annual average from 1994/95 to 1998/99 and Canadian data is for 1999/00. Department of Health and Social Services, *The NWT Health Services Report 2000*, Appendix 2, and *Canadian Institute for Health Information, 1999/00*.
75 NWT Department of Health and Social Services, *The NWT Health Services Report 2000*, p. 19.

NWT women see a physician more often than NWT men in their younger years (Figure 8.6). Yet, as NWT residents age the difference in frequency of visits to a doctor appears to narrow. At age 45 to 54, women encounter a physician nearly twice as often as do men. At age 70 to 89, women and men have approximately the same number of annual encounters. After age 89, women continue to have in excess of 12 encounters per year, compared to men who have less than eight per year.

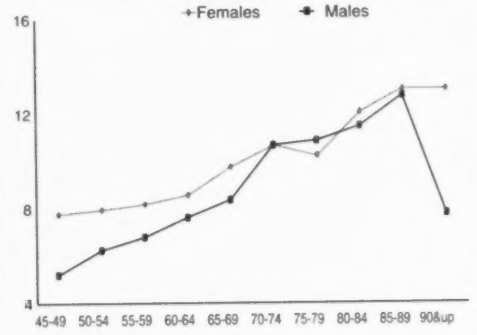
As was seen in the *NWT Health Services Report 2000*, a large proportion of physician/patient contacts were for reasons other than a known or suspected condition or illness. This remains true when one examines the reasons for senior patient encounters with physicians. About 42% of encounters were for special investigations and examinations, counseling on treatment plans, test results, medical advice and education. Screening for diseases, such as cardiovascular, respiratory, genitourinary and cancer also figure prominently. As well, a large proportion of these encounters were classified as symptoms, signs and ill-defined conditions. This grouping includes various presenting symptoms such as headaches, chest or stomach pains that cannot easily be attributed to a particular condition, or symptoms that could relate to more than one condition.

The other 58% of physician encounters with seniors are classified under 15 broad categories of illnesses and conditions. Table 8.2 lists the proportion of physician encounters according to major disease classification for patients age 65 to 74 for the three-year period from 1997/98 to 1999/00.

Circulatory diseases accounted for 20% of the visits to physicians by seniors, age 65 to 74, followed by diseases of the respiratory system and diseases of the musculoskeletal system and connective tissue at approximately 12% each.

Table 8.3 is the same as Table 8.2, except that it only includes information for seniors age 75 years or older. Diseases of the circulatory system are still highest at 17%, but are followed closely by diseases of the respiratory system at 15%. Diseases of the nervous system and sense organs figure more prominently as a reason to see a physician with older seniors, than with those under 75. Injuries also increase in proportion for seniors 75 and over, compared to those under 75.

Figure 8.6
Average Number of Physician Encounters Per Patient
NWT, Annual Average 1997/98 to 1999/00



Source: Department of Health and Social Services.

Table 8.2
Physician Encounters by Reason, Age 65 to 74
NWT, 1997/98 to 1999/00

Reason	Proportion
Circulatory System	20.0%
Respiratory System	12.2%
Musculoskeletal System & Connective Tissue	11.9%
Nervous System & Sense Organs	9.9%
Digestive System	8.7%
Gentinourinary System	7.5%
Endocrine, Nutritional, Metabolic and Immunity	6.9%
Injury & Poisoning	5.8%
Neoplasms	5.4%
Mental Disorders	5.3%
Other Reasons	6.4%

Source: Department of Health and Social Services.

Table 8.3
Physician Encounters by Reason, Age 75 & Up
NWT, 1997/98 to 1999/00

Reason	Proportion
Circulatory System	17.3%
Respiratory System	15.1%
Nervous System & Sense Organs	14.3%
Musculoskeletal System & Connective Tissue	11.7%
Injury & Poisoning	7.5%
Mental Disorders	6.8%
Digestive System	6.7%
Gentinourinary System	5.3%
Neoplasms	5.2%
Endocrine, Nutritional, Metabolic and Immunity	3.8%
Other Reasons	6.4%

Source: Department of Health and Social Services.

Table 8.4
Average Number Physician Encounters Per Patient
NWT, 1994/95-96/97 to 1997/98-1999/00

	Three Year Averages				Change 94-96 to
Age	94-96	95-97	96-98	97-99	97-99
45-49	6.5	6.5	6.5	6.5	-0.3%
50-54	6.8	6.9	7.0	7.1	3.7%
55-59	7.4	7.5	7.5	7.5	1.7%
60-64	7.8	8.0	8.1	8.1	3.9%
65-69	9.2	9.1	9.1	9.0	-2.5%
70-74	9.0	9.5	10.1	10.7	18.7%
75-79	9.8	10.1	10.6	10.5	7.0%
80-84	11.0	11.3	11.8	11.8	7.4%
85-89	9.4	10.6	12.3	12.9	37.0%
90&Up	13.3	12.7	12.1	11.3	-14.7%

Note: Numbers are rounded to nearest 1/10th.
Source: Department of Health and Social Services.

Table 8.4 shows the number of physician encounters per patient in three-year annual averages between 1994 and 1999. For most age groups 65 and over, the average number of physician encounters per patient has increased over the last half of the 1990s. The largest increases were experienced in the 70 to 74 and 85 to 89 age groups at 19% and 37%, respectively. Patients age 65 to 69 and patients 90 and older had a reduction in the number of physician encounters at 3% and 15%, respectively.

Seniors require more health services than others, but there is a good chance that they will require relatively less in the future. First, tomorrow's senior population will likely be more educated, and more able to make informed health choices. Second, there is an increasing recognition by health professionals of the importance of prevention. Third, non-institutional forms of health care, such as home care, are being expanded. This will provide future reductions in the time a patient requires hospitalized recovery care.

Chapter 9
Extended Health Benefits Drug Plan

There are two extended health benefit plans accessible to seniors in the NWT. These plans each target a different ethnic group(s) and cover, among other things, the cost of prescription and non-prescription drugs. The largest is the federal Non-Insured Health Benefits (NIHB) for status Indian and Inuit. The second largest is Extended Health Benefits (EHB) funded by the NWT Department of Health and Social Services for all non-Aboriginal and Metis residents age 60 and over.

Unfortunately, NIHB claimant data for the NWT is combined with Nunavut, and currently cannot be separated. EHB data provides a good indication of the use of drugs by non-status seniors (non-Aboriginal and Metis). Since NIHB data cannot be included, this chapter can only present information for about half the senior population (i.e. those receiving EHB). We cannot assume that the drug consumption of these seniors is similar to their Dene and Inuit peers.

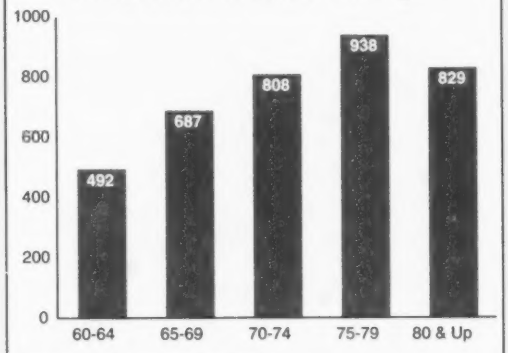
Claimants, Claims and Expenditures

Approximately 61% of the non-status population age 60 and over make drug claims against the EHB program. The proportion of the senior population making drug claims varies with age.

Figure 9.1 shows the annual average rate of claimants per 1,000 people by age from 1998/99 to 2000/01. The proportion of the population making claims against the senior portion of EHB increases with age until 75 to 79, and drops off for those 80 and over.

There is little variance in the proportion of drug claims for senior women compared to senior men in drug claims — approximately 573 per 1000 for senior women age 60 and up compared to 645 per 1000 senior men.

Figure 9.1
EHB - Claimants by Age
Rate Per 1,000
NWT, 1998/99 to 2000/01 Average



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.1
EHB - Drug Claimants Per 1,000 People
NWT, 1994/95-96/97 to 1997/98-1999/00

	Three Year Averages				
Age	94-96	95-97	96-98	97-99	98-00
60-64	563	548	532	508	492
65-69	776	758	744	695	687
70-74	878	887	891	854	808
75-79	913	907	875	911	938
80&Up	769	800	826	815	829

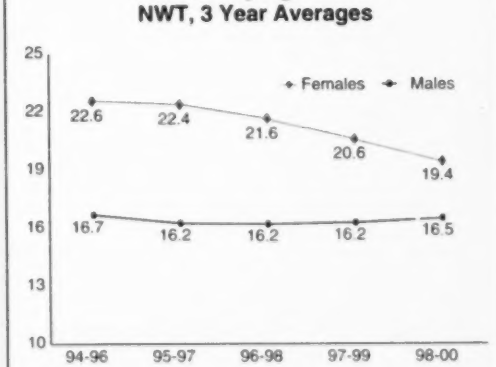
Sources: Department of Health and Social Serivces, and NWT Bureau of Statistics.

Table 9.2
EHB - Average # of Drug Claims Per Claimant
NWT, 1994/95-96/97 to 1997/98-1999/00

	Three Year Averages				
Age	94-96	95-97	96-98	97-99	98-00
60-64	11.2	11.6	11.6	11.4	11.6
65-69	16.5	16.7	15.8	15.2	14.3
70-74	17.1	16.0	16.9	18.3	19.0
75-79	26.2	23.0	21.7	19.5	18.8
80&Up	32.3	31.3	30.5	29.0	26.6

Sources: Department of Health and Social Serivces.

Figure 9.2
EHB - Average # of Drug Claims Per Claimant Per Year by Age & Sex
NWT, 3 Year Averages



Sources: Department of Health and Social Services.

Table 9.1 shows the change in the rate of use of EHB by the non-status senior population over the latter half of the 1990s. Here, the annual rate of use of the drug benefit portion of the EHB program has been grouped into three-year averages.[76] The proportion of seniors age 60 to 64 making a claim for drugs decreased by 13% (from 583 per 1000 in 1994/95-96/97 to 492 per 1000 in 1998/99-00/01), whereas the proportion of the senior population age 80 and up making a drug claim increased by 8% from 769 per 1000 to 829 per 1000 over the same time period.

While senior men are more likely to make a drug claim today, this was not always the case. On average, between 1994/95 and 1996/97, 686 per 1000 senior women made a drug claim compared to 628 per 1000 senior men.

The average number of drug claims per claimant varies considerably with age. Table 9.2 shows the average number of claims per claimant in three-year averages between 1994/95-1996/97 and 1998/99-2000/01. EHB claimants age 60 to 64 years made an average of 11.6 claims per year between 1998/99 and 2000/01. Claimants age 80 and up made an average of 26.6 claims over the same time period.

There has been a downward trend in the average number of claims when all seniors are considered together. The largest decreases have come with claimants age 75 and over. Some small increases have been seen with claimants age 60 to 64 and 70 to 74.

Figure 9.2 shows the change over time in the average number of claims per claimant by sex for seniors age 60 and up. Between 1994/95 and 1996/97, there was an average 22.6 claims per female claimants compared to 16.7 for males. By 1998/99-2000/01, the average number of claims had dropped by 27% for women to 19.4 compared to a negligible decrease for men to 16.5.

76 Three-year averages have been used to smooth out the year over year variances created by small numbers.

Just as the proportion of the senior population using the EHB drug program varies with age, so does the cost per capita. As seen in Figure 9.3, the cost per capita grows with age from $250 for seniors age 60 to 64, to over $600 per capita for seniors age 70 and up.

As with the other indicators of drug use by non-status seniors, the cost per capita has decreased over the latter half of the 1990s. Table 9.3 shows the three-year averages for per capita drug expenditures between 1994 and 2000.

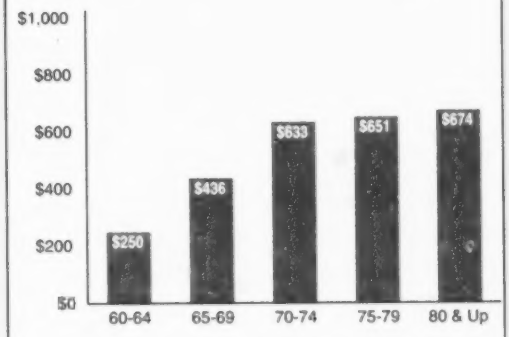
For seniors of all ages, the cost per capita has declined by 13%. However, the cost has decreased the most for those age 75 to 79 and 80 and up with 28% and 17% decreases. As with other indicators of drug use, the senior women experienced a large reduction in per capita drug expenditures, whereas men showed a small increase.

Type of Drugs Used[77]

Drugs can be categorized by their therapeutic use. A common classification system is the American Hospital Formulary System (AHFS).

Figure 9.4 shows the proportion of the senior population by EHB drug claims according to the broadest AHFS categories.[78] Approximately 32% of the non-status senior population used a drug classified under the category of central nervous system (CNS). Approximately 29% of seniors used a cardiovascular (CVS) drug, followed by 20% each for gastro-intestinal (GI) and anti-infective (AI), 18% for hormone and synthetic substances (H&SS), 17% for electrolyte, caloric and water balance agents (EC&W), and about 11% for skin and mucous membrane preparations (S&MM). Each of the top five broad categories is described in more detail below.

Figure 9.3
EHB - Per Capita Drug Expenditure by Age
NWT, 1998/99 to 2000/01 Average



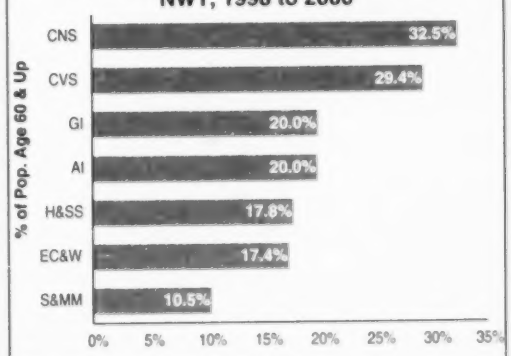
Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.3
EHB - Per Capita Drug Expenditures
NWT, 1994/95-96/97 to 1997/98-1999/00

	Three Year Averages				
Age	94-96	95-97	96-98	97-99	98-00
60-64	$282	$275	$268	$255	$250
65-69	$519	$507	$487	$455	$436
70-74	$643	$629	$675	$690	$633
75-79	$894	$792	$722	$669	$651
80&Up	$807	$803	$785	$732	$674

Sources: Department of Health and Social Serivces, and NWT Bureau of Statistics.

Figure 9.4
Top Seven Drugs
Used by Seniors by AHFS Category
NWT, 1998 to 2000



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

77 The description of the uses of the drugs provided in section 9.2 is not intended to be an exhaustive list. Rather, the focus is only on the most common use of drugs. All drug use descriptions are taken from Micromedex Thomson Healthcare, *Drugs.com*, March 2002.

78 The drug use documented in Figure 9.2.1 covers three years - 1998/99 to 2000/01, and only includes non-status (non-Aboriginal and Metis) seniors age 60 and over.

Table 9.4
Top Five Central Nervous System Drugs by Sub-Category
Proportion of Senior Population
NWT, 1998/99 to 2000/01

CNS Subgroups	% of Pop.
ANALGESICS AND ANTIPYRETICS	27.2%
SEDATIVES AND HYPNOTICS	7.1%
ANTIDEPRESSANTS, TRANQUILIZERS, & OTHER PSYCHOTHERAPEUTIC AGENTS	6.6%
ANTICONVULSANTS	2.0%
MISC. CENTRAL NERVOUS SYSTEM AGENTS	0.5%

CNS = Central Nervous System.

Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.5
Top Five Cardiovascular Drugs by Sub-Category
Proportion of Senior Population
NWT, 1998/99 to 2000/01

CVS Subgroups	% of Pop.
CARDIAC DRUGS	24.6%
ANTILIPEMIC AGENTS	6.4%
HYPOTENSIVE AGENTS	4.8%
VASODILATING AGENTS	4.8%
CARDIAC DRUGS & DIURETICS	0.2%

CVS = Cardiovascular

Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.4 displays the largest central nervous system sub-groups. Here, 27% of the senior population used analgesics and antipyretics for relief of pain and inflammation, often associated with arthritis, headaches, and other physical pain (post-surgery or injury). The most commonly used anti-inflammatory agents were drugs containing aspirin (acetylsalicylic acid), ibuprofen, and/or naproxen. Opiates (pain killers) primarily included codeine (acetaminophen with codeine) also for headaches and general pain relief. Other analgesics and antipyretics primarily included plain acetaminophen.

Sedatives and hypnotics accounted for the second largest sub-group of the central nervous system drugs. The drugs primarily used by NWT non-status seniors in this category are referred to as benzodiazepines. These are drugs that treat nervousness, anxiety, tension and other symptoms by acting on the central nervous system. The most common benzodiazepine was lorazepam (i.e. Ativan).

Close behind sedatives and hypnotics were antidepressants, tranquilizers and other psychotherapeutic agents. This subgroup accounted for the third largest use of central nervous system drugs by seniors with almost 7% of the population make use of these. The most common were antidepressants, such as selective serotonin reuptake inhibitors (SSRIs), that treat the chemical imbalances causing depression, panic or anxiety, or obsessive or compulsive symptoms. Such drugs commonly used by EHB beneficiaries include fluoxetine (i.e. Prozac), sertraline (i.e. Zoloft) and paroxetine (i.e., Paxil). Other drugs commonly used within this sub-class of central nervous system drug, include amitriptyline and trazodone. Similar to the SSRIs, they are also used to treat depression due to an imbalance in brain chemicals.

Another smaller group of drugs used by seniors that are within this central nervous system sub-category are anti-psychotic drugs – primarily haloperidol (i.e., Haldol) and risperidone (i.e., Risperdal). Haloperidol and risperidone are used to treat the symptoms of psychotic conditions.

After central nervous system drugs, cardiovascular drugs (CVS) were the most commonly used by seniors in the EHB plan. Within the cardiovascular drugs sub-group (see Table 9.5), cardiac was the most common class of drugs, with almost 25% of seniors using one or more of the over a dozen cardiac drugs.

Two of the most common drugs used were enalapril (i.e. Vasotec) and amlodipine (i.e. Norvasc). Enalpril is used to lower blood pressure, and prevent and treat heart failure. Amlodipine is primarily used to treat hypertension (high blood pressure) and angina (chest pain).

Antilipemic agents block the production of harmful forms of cholesterol and can help to increase the amount of good cholesterol in the body. The actions of antilipemic agents help to reduce the risk of arterial hardening, which can lead to heart attacks, stroke and other types of cardiovascular disease. The drugs most commonly used were atorvastatin (i.e. Lipitor) and pravastatin (i.e. Pravachol).

Hypotensive agents are primarily intended to treat hypertension. Vasodilating agents are often used to treat angina, prevent attacks, relieve an attack and, with long-term use, to reduce the frequency of attacks. The main vasodilating agent used in the NWT is a nitroglycerin oral spray.

Gastrointestinal drugs (see Table 9.6) are the third most prominent in use amongst non-Aboriginal and Metis seniors in the NWT. The most common drugs are used in the treatment of ulcers, gastroesophageal reflux disease (heartburn) and other excessive stomach acid conditions. The two most common drugs used for these conditions were omeprazole (i.e. Losec) and ranitidine (i.e. Zantac).

Anti-infective drugs were the fourth most common set of drugs used by seniors, with various antibiotics being the most common in this sub-group (see Table 9.7). Here, drugs such as amoxicillin and sulfamethoxale were prescribed mainly for the treatment of bacterial infections.

Hormones and synthetic substitutes were the fifth most common sub-group of drugs used by seniors. The most prominent in use were insulins and anti-diabetic agents used to treat diabetes, with about 8% of the non-status senior population having a prescription (see Table 9.8). Adreno-steroids were a close second in use, consisting primarily of anti-inflammatory steroid drugs used for the treatment of asthma and for endocrine conditions when the body does not produce enough of its own steroids. They can also be used for arthritis, ulcerative colitis and

Table 9.6
Top Five Gastorintestinal Drugs
by Sub-Category
Proportion of Senior Population
NWT, 1998/99 to 2000/01

GI Subgroups	% of Pop.
MISCELLANEOUS GI DRUGS	14.9%
CATHARTICS AND LAXATIVES	4.1%
MISC. GI NONSTEROIDAL & ANTI-INFLAMMATORY AGENTS	3.3%
ANTIEMETICS	1.6%
ANTACIDS AND ADSORBENTS	0.2%

GI = Gastrointestinal.

Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.7
Top Five Anti- Infective Drugs
by Sub-Category
Proportion of Senior Population
NWT, 1998/99 to 2000/01

AI Subgroups	% of Pop.
ANTIBIOTICS	15.0%
MISCELLANEOUS ANTI-INFECTIVES	5.7%
ANTIMALARIAL AGENTS	1.3%
QUINOLONES	0.6%
URINARY ANTI-INFECTIVES	0.6%

AI = Anti-infective.

Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Table 9.8
Top Five Hormone and Sythetic Substitutes
by Sub-Category
Proportion of Senior Population
NWT, 1998/99 to 2000/01

H&SS Subgroups	% of Pop.
INSULINS & ANTIDIABETIC AGENTS	8.0%
ADRENALS	6.7%
ESTROGENS	4.2%
PROGESTINS	0.4%
THYROID AGENTS	0.2%

H&SS = Hormone and Synthetic Substances.

Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Crohn's disease, as well as severe allergies and skin problems. Third in this group were estrogens. Estrogens are primarily used in hormone replacement therapy for post-menopausal women.

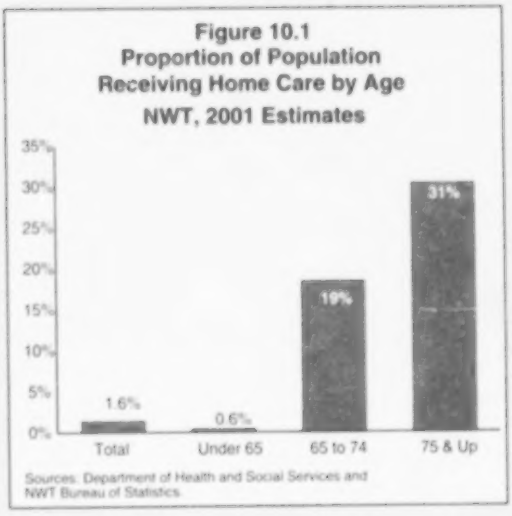
It is difficult to project the use of drugs by a portion of the entire population. Detailed population projections for seniors by ethnicity are not available. We do know that non-Aboriginal seniors make up most of the non-status senior population in the NWT and they have been growing faster than the Aboriginal senior population.

Given this growth, it can be reasonably expected that demand for the EHB senior drug program will increase over the next two decades. Some of the growth in demand due to simple population increases may be tempered somewhat by a possible reduction in drug use amongst non-status seniors. Moreover, as noted in previous chapters, tomorrow's seniors will not be the same as today's seniors. If the people moving into their senior years over the next twenty years are healthier due to better diet, more exercise, less alcohol use, and a reduction in tobacco consumption, then drug use will presumably decrease.

Finally, there is a need to integrate NIHB data with EHB data to provide a more comprehensive picture of drug use by NWT seniors. Such an integration of the data from both programs would also allow for more detailed analysis in comparing the patterns of drug use amongst seniors in long-term care facilities versus those who are not institutionalized.

Chapter 10
Home Care and Long-term Care

Home care and long-term care are two programs primarily, but not exclusively, serving seniors. They are grouped together in this chapter due to their co-relationship. Home care helps to reduce demand for residential care by providing services to semi-independent clients in their homes. The more comprehensive the home care service, the longer a person can function and remain at home. Often, residential care is the only option when the patient requires 24-hour care and non-institutional care is unavailable.



Home Care

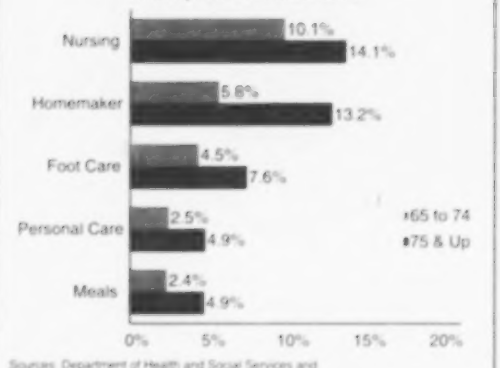
Home care services range from meals and housekeeping to personal hygiene and assistance with medication and post-operation dressing changes, foot care and other health care needs. Approximately 660 people received home care services in 2001.[79] Of these clients, almost two thirds were age 65 and over.

It is difficult to examine home care in a comprehensive manner since a home care client database does not exist yet. Information is collected in terms of the number of clients at the beginning and end of the month and the types of services received, and not on an individual encounter basis. Most information is relatively recent.

Figure 10.1 shows an estimate of the proportion of the population receiving home care for 2001. Approximately 1.6% of the population received a home care service. Most of the clients were age 65 and up, with approximately 19% of all people age 65 to 74 (20% of females and 18% of males) and 31% age 75 and up (34% of females and 27% of males). Unfortunately, the age groups shown in Figure 10.1 are the only ones available for home care statistics. It is likely that the population in their late fifties and early sixties are receiving a larger proportion of home care services than those under 55. Thus, the jump by age group would not be as dramatic as seen in Figure 10.1 if greater age detail were available.

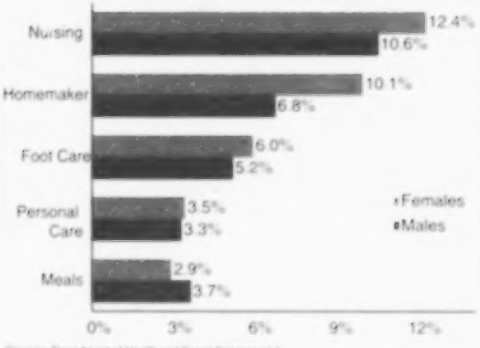
[79] All numbers are estimates based on an average of monthly home care statistical reports provided by community and regional offices. See Appendix 2 for more details.

Figure 10.2
Proportion of Senior Population by Type of Home Care & Age
NWT, 2001 Estimates



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Figure 10.3
Proportion of Senior Population by Type of Home Care & Sex
NWT, 2001 Estimates



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

The top services provided to seniors in their homes (in order of decreasing magnitude) were: nursing care, homemaking, foot care, meals and personal care. As seen in Figure 10.2 the proportion of the senior population by type of service received varies by age. Around 10% of the population age 65 to 74 received some nursing care compared to almost 14% of the population age 75 and over. The difference in proportion of the population by service type widens for homemaker, foot care, personal care and meal services.

Figure 10.3 shows the proportion of the senior population by sex for each of the five main service types. Senior women were more likely to receive nursing services than senior men, at 12% and 11% respectively. Similarly, a greater proportion of senior women received home making services than senior men at 10% compared to 7%. A convergence occurs with foot care, personal care and meal services. Senior men and women proportionately received about the same amount of these three services.

If the current rate of home care use continues then nearly 1,600 people will require home care services by 2020, of which over 1,300 would be seniors.[80]

Long-term Care

There are nine long-term care facilities in the NWT providing 24-hour care primarily, but not exclusively, to seniors. Three are extended-care wards[81] of hospitals (Stanton in Yellowknife, H.H. Williams Memorial in Hay River and Inuvik Regional), four are separate facilities for seniors and people with disabilities (Northern Lights in Fort Smith, Woodland Manor in Hay River, Fort Simpson Long-term Care Facility and Aven Manor in Yellowknife), and two are seniors' homes (Jimmy Erasmus Senior Citizens Home in Rae-Edzo, and Joe Greenland Centre in Aklavik).

Generally, clients entering a long-term care facility do not return home. Some clients are short term to receive respite care. These clients are placed in an institution to provide a break for their usual care providers, often their children or other relations.

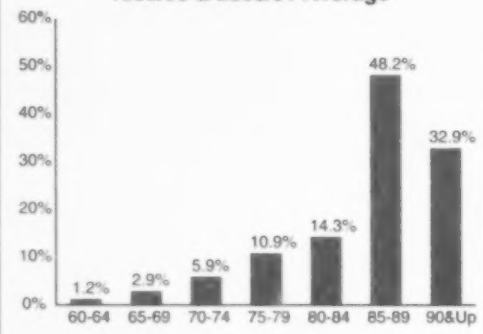
80 It is important to realize that these projections are based on the use of home care services over the course of one year. For more details on the projection methodology see Appendix 2.
81 The extended care wards of hospitals traditionally provide the highest level of care.

As people age, the chance of loosing independence and requiring care increases. But not everyone spends time in a long-term care facility. As seen in Figure 10.4, the proportion of the population spending time in such a facility increases dramatically with age. Only 14% of the population age 80 to 84 spent one or more days in a long-term care facility, compared with 48% of the population age 85 to 89.

Even less people spend what can be considered a relatively long time in a facility (greater than 90 days), as is seen in Figure 10.5. Greater than 90 days is a safe indication that these long-term care clients were not in for respite care.

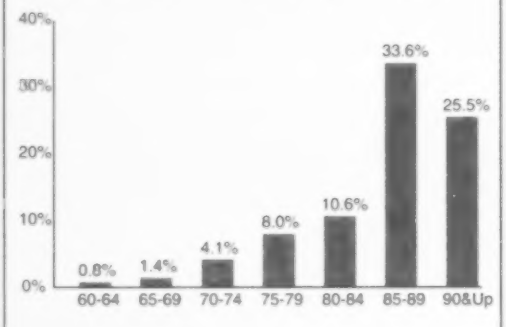
With the growing senior population in the NWT (see Chapter 1), the demand for long-term care beds will rise dramatically over the next 10 to 20 years. A current study by KPMG Consulting has predicted that the NWT will require up to 218 beds by 2012, assuming a status quo in utilization levels.[82] Another internal departmental study has predicted the need for 327 beds by 2020, based on current utilization rates.[83] Currently, there are approximately 166 long-term care beds serving clients of all ages. The KPMG prediction of a need for 52 more beds is based on current rates of long-term care use continuing into the future. Programs such as home care and health promotion, coupled with the changing nature of the senior population can help to reduce the demand for long-term care beds. Nevertheless, given the aging of the NWT population it is safe to expect significant future demands on the long-term care system in years to come.

Fig 10.4
Proportion of Population in a LTC Facility per Annum 1999/00 & 2000/01 Average



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

Figure 10.5
Proportion of Population Spending >90 Days per Annum in a LTC Facility 1999/00 & 2000/01 Annual Average



Sources: Department of Health and Social Services and NWT Bureau of Statistics.

82 KPMG Consulting, *Long Term Care Needs Assessment*, Final, May 2002.
83 Department of Health and Social Services, *Long-term Care Report 1999/00 and 2000/01*, (Draft 2001), p. 3.

Moving Forward

This profile provides a broad look at the health of NWT seniors at the turn of the century. NWT seniors compare favourably to seniors nationally on several health status measures. Furthermore, there is evidence pointing to the health status of NWT seniors rising over the next twenty years.

NWT seniors can expect to live as long as their national counterparts. And, as has been seen with national data, life expectancy at age 65 has been rising over the last decade in the NWT.

Future seniors, those currently in their forties and fifties, will on average, have higher levels of education and potentially greater sources of retirement income than today's senior population.

Tomorrow's senior population will have a greater understanding of the basics of a healthy diet and lifestyle. Such an understanding may lead to healthy choices and a reduction in illness among seniors.

Despite this profile's positive findings, present NWT seniors score lower than seniors nationally on a number of indicators. The Department of Health and Social Services is working, where it can, to improve the health status of current and future seniors.

NWT seniors have lower levels of income and formal education than seniors nationally. They are more likely to have poorer diets, to be inactive and to be smokers more than seniors nationally. They are hospitalized more often and are more likely to die from respiratory diseases than seniors elsewhere.

The Department of Health and Social Services participates in an interdepartmental working group dealing with, among other things, income. Here, efforts are being made to develop standardized criteria for income assessment across all GNWT seniors' programs.[84] In addition, the Department of Health and Social Services has the lead responsibility to develop a set of program principles, which will include *"security - having adequate income as one ages...."*[85]

Relative to other jurisdictions, the NWT has a strong set of programs and benefits for seniors which help to offset the cost

84 Seniors Interdepartmental Working Group for Seniors Programs and Services, *Seniors' Action Plan 2002-2003 - Response to the Review of Programs and Services for Seniors*, June 2002, p. 6.

of living (fuel and housing subsidies, extended health benefits, among others). All of these programs and benefits, along with income supplements, work to help seniors who have low incomes.

Nearly half of NWT seniors have less than a grade nine education, and are likely to have trouble reading and writing. It is important that communications between government and the NWT's senior population fit with this reality. Visual and audio messages (especially in aboriginal languages) via television and radio are likely to have more effect than solely the written word.

Conditions such as heart disease and stroke, Type 2 diabetes, colorectal and lung cancer, and some digestive and respiratory diseases, do not arise in a few years, but rather take decades to develop. Furthermore, such conditions are often the direct result of poor lifestyle choices. With healthier lifestyles many of the aforementioned conditions are preventable or at least can be delayed via a healthy lifestyle.

For these reasons, the Department of Health and Social Services, along with other GNWT departments, targets children, youth and adults, through health promotion programs such as *Early Childhood Development, Active Living* (balanced diet and exercise) and *Action on Tobacco: A Territorial Strategy for Tobacco Control* (smoking cessation). While people at any age can benefit from positive lifestyle changes, lifestyle is often a product of habits formed in one's younger years. Successful health promotion will lead to a healthier senior population in future decades.

Home care is an area in which the Department of Health and Social Services is working to improve the lives of seniors. Home care services allow seniors to remain in their homes longer, with a much greater deal of independence than if they were institutionalized. Home care also allows seniors to return home sooner after a hospital procedure than would otherwise be the case. Thus, through such programs as the *First Nations and Inuit Home and Community Care Initiative*, home care services are being enhanced throughout the NWT.[86]

Even with home care, the need for long-term care beds will grow

85 Ibid. p. 15

with the senior population, as not all people can stay in their homes for their entire lives. The Department of Health and Social Services recognizes the need for long-term care, and within its Continuing Care Framework, has identified both the number of facility beds required and the types of programs needed for the next 5 to 10 years.[87]

All of these actions by the Department of Health and Social Services will help to improve the health status of NWT seniors in present and the future. Once provided with the necessary information and services, today's seniors, as well as tomorrow's seniors, need to take responsibility for their own health in terms of making healthy dietary and lifestyle choices. In the end, action based on knowledge will lead to positive change.

86 Ibid, p. 9.
87 Ibid, p. 9

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Appendix 1 Glossary

Alcohol and Drug Psychoses: Psychoses associated with alcohol and/or drug use, including Korsakoff's syndrome (alcoholic).

Amitriptyline: The active ingredient in drugs used to treat depression due to an imbalance in brain chemicals.

Amlodipine: The ingredient in drugs primarily used to treat hypertension and angina.

Amoxicillin: An antibiotic used to treat bacterial infections.

Analgesics and Antipyretics: Agents that treat pain and fever. There are two main sub-classes: non-steroidal anti-inflammatory agents and opiates.

Angina: Severe chest pain associated with heart attacks (or myocardial infarction).

Antilipemic Agents: Drugs that block or reduce the production of negative cholesterols (types of fat) in the blood, and can help to increase level of good cholesterol in blood.

Antipyretics: A classification denoting drugs that fight fevers.

Ativan: A drug with the class referred to as benzodiazepines, containing the active ingredient lorazepam.

Atrovastatin: An antilipemic agent.

Benzodiazepines: Drugs that treat nervousness, anxiety, tension and other symptoms by slowing the central nervous system.

Bipolar Disorder: A manic-depressive psychosis, where manic and depressive symptoms are alternated or separated by periods of relative normality.

Cardiac Drugs: A sub-class of cardiovascular drugs, primarily intended to lower blood pressure, treat angina, and heart failure.

Cardiovascular: Refers to the heart and the blood vessels.

Circulatory Diseases: Diseases of the circulatory system, including heart disease and stroke.

Circulatory System: A general term referring to those parts of the body involved in the circulation of blood - heart, arteries, veins and other blood vessels.

Demographics: The characteristics of a population described in terms of size, distribution and composition (i.e. age, gender, ethnicity).

Depressive Disorder: A mood disorder characterized by feelings of sadness and despair. Symptoms can include: feelings of hopelessness, changes in eating patterns, disturbed sleep, constant tiredness and thoughts of death or suicide.

Digestive System: A general term referring to those parts of the body involved in digesting food - mouth, throat, stomach, and intestines.

Enalapril: Active ingredient in Vasotec, a drug used to lower blood pressure and to treat heart failure.

Estrogen: Hormone used in the treatment of a number of conditions, including osteoporosis and the discomforts of menopause.

Fluoxetine: A SSRI and is the active ingredient in Prozac.

Genitourinary System: A general term referring to the genitals and those parts of the body involved in urination.

Haldol: A drug containing Halperiodol, used to treat the symptoms of psychotic conditions.

Haloperidol: An ingredient used in anti-psychotic drugs (Haldol).

Hydrochlorothiazide: A drug used to treat high blood pressure and edema.

Hypertension: High blood pressure.

Hypotensive Agents: Agents that treat hypertension.

Labour Force: All the people, age 15 or over, who are employed or are looking for work.

Lipitor: A cholesterol-lowering drug containing atorvastatin.

Lorazepam: The active ingredient in drugs such as Ativan, used to treat anxiety, tension, nervousness and other symptoms, by affecting the central nervous system.

Losec: A drug used to treat heartburn.

Manic Disorder: A mood disorder characterized by periods of elation or feeling unusually 'high', restlessness, agitation, aggression and anger, grandiose ideas (delusions of greatness), and mixed-up thoughts.

Mental Disorders: A general term for a wide range of mental illnesses, including affective psychoses, alcohol and drug dependency and psychoses, bi-polar disorders, depressive disorder, manic disorder, neurotic disorders, psychoses, schizophrenia, and senile-related conditions.

Naproxen: A non-steroidal anti-inflammatory drug.

Neoplasms: Are growths which can be cancerous, non-cancerous or of an undetermined nature.

Non-steroidal Anti-Inflammatory Agents: The active ingredients in drugs such as aspirin, ibuprofen, and naproxen. These drugs are used for relief of minor headache and arthritic pain.

Norvasc: A drug used to treat hypertension.

Omeprazole: The active ingredient in Losec - used to treat gastro-intestinal conditions such as heartburn and ulcers.

Opiates: Drugs, such as codeine that suppress pain, without the loss of consciousness.

Palliative Care: Care for a person who is terminally ill. They have little chance of recovery and are made comfortable until they die.

Paroxetine: A SSRI and is the active ingredient in drugs such as Paxil.

Paxil: A drug used to treat an imbalance in the brain's chemicals that has caused depression and other symptoms.

Pravachol: A cholesterol-lowering drug containing pravastatin.

Pravastatin: An antilipemic agent.

Privinal: A drug used to treat hypertension.

Prozac: A drug used to treat an imbalance in the brain's chemicals that has caused depression and other symptoms.

Psychoses: A general term for a large number of mental disorders, including affective psychoses, organic psychoses (i.e., alcoholic psychoses and senile-related conditions) and schizophrenic disorders. Generally, impairment of mental function has developed to a degree that it interferes grossly with one's ability to meet some ordinary demands of life or to maintain contact with reality. Symptoms can include: delusions (false or irrational beliefs), hallucinations (seeing or hearing things that do not exist), markedly incoherent speech, or disorganized and agitated behaviour.

Ranitidine: A drug used to treat ulcers and heartburn.

Respiratory System: A general term referring to the parts of the body involved in the process of breathing - nose, throat, and lungs.

Respite Care: Care for a person who is normally cared for in a non-hospital based setting. The care is intended to provide a rest (respite) for the patient's regular caregiver(s).

Risperdal: An anti-psychotic drug.

Risperidone: The active ingredient in Risperdal.

Schizophrenia: A group of psychoses in which there is a fundamental disturbance of personality, a characteristic distortion in thinking, often a sense of being controlled by alien forces, bizarre delusions (false or irrational beliefs) and hallucinations (seeing or, especially hearing, things that do not exist).

Selective Serotonin Reuptake Inhibitors (SSRIs): Describes a class of drugs containing ingredients (i.e. fluoxetine, setraline, or paroxetine) that help to treat depression in patients where the depression and other symptoms (panic, anxiety, obsessive or compulsive behaviour) have been caused by an imbalance in brain chemicals.

Sertraline: A SSRI and is the active ingredient in drugs such as Zoloft.

Sulfamethoxale: An antibiotic used to treat bacterial infections.

Trazodone: The active ingredient in drugs used to treat depression caused by an imbalance in brain chemicals.

Vasodilating Agents: Drugs often used to treat chest pain. They dilate blood vessels to allow for an increase in blood flow.

Vasotec: A drug containing enalapril used to treat high blood pressure.

Zantac: A drug containing ranitidine used to treat gastrointestinal conditions such as heartburn.

Zoloft: A drug used to treat an imbalance in the brain's chemicals that has caused depression and other symptoms.

Appendix 2
Data Sources and Methodology

General

NWT data primarily came from either the NWT Department of Health and Social Services or the NWT Bureau of Statistics. All Canadian data come from Statistics Canada, Canadian Institute for Health Information and Health Canada.

A large portion of the morbidity and mortality data (i.e. hospitalizations, deaths, cancers, etc.) in this report have been turned into population-based rates. The population data used in this report are estimates subject to future revisions. The morbidity and mortality data, to a much lesser degree, is also subject to future revisions.

The following is a chapter-by-chapter explanation of data sources and methodology.

Chapter 1

The source of the NWT population figures is the NWT Bureau of Statistics. The NWT Bureau of Statistics released these numbers in April 2000 and January 2001 - prior to the release of the 2001 Census counts. Census data have not been used here since it appears that the 2001 Census missed as much as 10% of the NWT population. Post-census estimates were not available for this profile.

Canadian population data came from Statistics Canada.

All population figures, past and projected, are estimates and are subject to future revisions.

Chapter 2

The source of the income data is Statistics Canada: Census and Small Area and Administrative Data Division.

A senior is a person age 65 and over for the section on income. Retirement, and therefore a drop in income, generally occurs by age 65 providing a standard cut-off for analysis.

NWT employment data came from the NWT Bureau of Statistics' *NWT Labour Force Survey*. Historically, the NWT Bureau of Statistics has conducted a labour force survey every five years. National employment data comes from Statistics Canada.

A senior is a person age 65 and over for the section on employment. Retirement, or at least semi-retirement, generally occurs by age 65, and therefore provides a standard cut-off for analysis.

Education data also came from the *NWT Labour Force Survey*.

A senior is a person age 60 and over for the section on education. In this section education (less than grade

nine) is used as a proxy for illiteracy. Most NWT seniors' programs put eligibility at age 60. Government and non-government communication about programs must take forms that are understandable by the program's target population. Therefore, age 60 and up is a more appropriate cut-off for analysis.

Housing data came from the *NWT Housing Survey* done every four years. The *NWT Housing Survey* attempts to cover every household in communities outside of Yellowknife, Hay River, Inuvik and Fort Smith.[88]

1992 survey results were not weighted, thus aggregations are not possible where the survey sample was not 100%.

A senior is a person age 60 and over for the section on housing. NWT senior housing programs put eligibility at age 60. Therefore, age 60 and over is a more appropriate cut-off for analysis.

Chapter 3

The data for the culture section came from the NWT Bureau of Statistics and Statistics Canada. The NWT Bureau of Statistics asked questions on the *1999 NWT Labour Force Survey* about trapping and crafts, as well as language knowledge. Statistics Canada, in the 1996 Census, also asked questions about language.

Both age 60 and 65 are used as the start of the senior years in the section on culture. As with education, age 60 and up for language statistics was more relevant for understanding communications around programs. In some cases age 65 was the only cut-off available.

Data on volunteer activity in the NWT came from the *1999 NWT Labour Force Survey*.

Age 65 is used for the section on volunteering since it is the general age of retirement, or at least semi-retirement. Once retired, more free time for volunteering is available.

Data on living arrangements was from the 1996 Census. Unfortunately, 2001 data had not yet been released when the research for this report was being done.

Age 65 and up was the age category available for comparison to the Canadian population on living arrangements.

Chapter 4 and Chapter 5

For Chapter 4, data on diet, food insecurity, physical activity and alcohol consumption came from the CCH Survey in the NWT.[89] Data available for this report was from the first cycle of the survey in 2000. NWT data on tobacco use comes from the *1999 NWT Labour Force Survey*, and Canadian data came from Statistics Canada.

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88 NWT Housing Corporation and NWT Bureau of Statistics, *NWT Housing Needs Survey – 2000* (Overall Results & Community Detail) March 2000, p. 21.
89 The CCH Survey data is from the provincial/territorial share file. Some survey respondents chose not to have their answers shared outside of Statistics Canada. Thus, CCH Survey data in this report will not exactly match data provided directly from Statistics Canada.

For Chapter 5, all the data on subjective health status came from the CCH Survey.

A senior is anyone age 65 and up for all sections of both chapters. This age cut-off is used because of the connection between personal health practices and objective measures of health status (morbidity and mortality), and in order to make relevant comparisons to other jurisdictions.

In addition to comparisons to the Canadian senior population, comparisons are made to a peer group of the NWT. This peer group is made up of health regions sharing demographic and socio-economic characteristics with the NWT.[90] The following are the constituent health regions of the NWT peer group:

1. Health Labrador Corporation
2. Region du Nord-du-Quebec
3. Norman, Manitoba
4. Churchill, Manitoba
5. Mistahia Regional Health Authority, Alberta
6. Keeweetinok Lakes Regional Health Authority, Alberta
7. Northern Lights Regional Health Authority, Alberta
8. Northwestern Regional Health Authority, Alberta
9. Caribou, B.C.
10. North West, B.C.
11. Peace Liard, B.C.
12. Northern Interior, B.C.
13. Yukon

Statistical Significance

Confidence intervals have been used to test for significant differences between CCH Survey results from the NWT against peer group and national survey results, as well as between NWT age cohorts.

For Chapters 4 and 5, tables are available upon request showing the corresponding confidence intervals, and coefficient of variations, to the values used in the graphs in the text. Please contact the Planning, Accountability and Reporting Division of the Department of Health and Social Services for further information: (867-920-8946).

Chapter 6

The morbidity data for Chapter Six comes from the Canadian Institute for Health Information, from several NWT Department of Health and Social Services databases: Territorial Hospital Insurance Services, Cancer Registry and Communicable Disease Registry.

Age 65 and over is considered a senior in Chapter 6. Morbidity is, to a large extent, age related, and thus program specific age cut-offs are not relevant. Furthermore, age 65 is used as a cut-off for seniors nationally for morbidity data.

90 For more information on peer groups see Larry MacNabb, Health Region Peer Groups (Statistics Canada, 2002).

There are two factors the reader should be aware of when comparing hospitalization rates between the NWT and Canada.

1. The NWT, due to its regional hospital system and reliance on southern Canadian facilities, tends to have a much larger number of transfers between hospitals than would be the case for majority of Canadian jurisdictions. For example, in some cases, there are patients who are hospitalized in Inuvik and then transferred to Stanton for the same condition, showing up as two hospitalizations (three if they end up in Edmonton).

However, despite the above over-counting, a manual examination of individual records found that approximately 15% of hospitalizations had involved transfers. Nevertheless, there is not currently a way to automatically group the transfers together in order to avoid this double counting.

2. Up to 20% of in-territory hospitalization data for 1999/00 is missing. A number of records were rejected due to system interface problems. Attempts to recover the data are planned for the near future. With the use of a three-year average, 1997/98 to 1999/00, and the avoidance of detailed analysis, any impact of the missing data has been marginalized.

While the former problem exaggerates the number of NWT residents hospitalized relative to national average, the latter problem somewhat mitigates this exaggeration due to the exclusion of hospitalizations from the analysis in this profile. Moreover, even if such duplication of hospitalizations were removed there would likely still be large differences in hospitalization rates between the NWT and Canada.

When reasons or causes of hospitalizations are provided, most of the categories are covered by the International Classification of Diseases, 9th Revision (ICD-9). There are 13 Classifications (or Chapters) for "known" or "suspected" medical conditions that are relevant to the senior population (see list below for a brief description of each of the classifications by relevancy to the Northwest Territories). Each one of these classifications or chapters contains several hundred codes, each of which provides a particular identification of the medical condition in question. Codes that make up the chapter are presented in sub-groupings, i.e., intestinal conditions, gallstones, gastritis, hernias and ulcers as sub-groupings of digestive diseases.

The following is a list of the six ICD-9 Classifications which figure prominently as causes for health service utilization by seniors in the Northwest Territories:

1. **Diseases of the Respiratory System** (Bronchitis, Asthma, Chronic Airway Obstruction and Pneumonia).

2. **Diseases of the Circulatory System** (Heart Diseases, Stroke, and Conditions related to Arteries and Veins etc).

3.**Injury and Poisoning** (Fractures, Sprains, Trauma, Poisoning by Chemicals, Open Wounds).

4.**Diseases of the Digestive System** (Gallstones, Pancreatic Diseases, Stomach and Intestinal Diseases, Appendicitis, Dental and Jaw Diseases).

5.**Diseases of the Nervous System and Sense Organs** (Paralysis, Epilepsy, Alzheimer's Disease, Parkinson's Disease, Ear and Eye Diseases or Infections).

6.**Neoplasms** (Cancerous and non-cancerous growths).

The following is a list of the remaining eight ICD-9 Classifications, relevant to seniors, which do not figure prominently - relative to the six above - as causes for health service utilization in the Northwest Territories. These are often seen grouped under "Other Conditions" throughout the report.

1.**Infectious and Parasitic Diseases** (Tuberculosis, Whooping Cough, Meningitis, Sexually Transmitted Diseases).

2.**Endocrine, Nutritional, and Metabolic Diseases** (Diabetes, Thyroiditis, Vitamin Deficiencies, Cystic Fibrosis, Obesity).

3.**Diseases of the Blood and Blood-Forming Organs** (Anemia, Diseases of White Blood Cells, Diseases of the Spleen).

4.**Diseases of the Genitourinary System** (Kidney and Bladder Disorders, Urethra and Urinary Tract Disorders, Inflammatory Diseases of the Reproductive Organs).

5.**Diseases of the Skin and Subcutaneous Tissue** (Cellulitis, Abscesses, Diaper Rash, Eczema, Psoriasis, Sunburn, Corns, Calluses, Ingrown Nails, Baldness, Acne).

6.**Diseases of the Musculoskeletal System and Connective Tissue** (Lupus, Sclerosis, Arthritis, Spinal Disorders, Rheumatism, Bunions, Osteoporosis).

7. **Mental Disorders** (Alcohol Psychoses, Senile Dementia, Depression, Neurotic Disorders and Schizophrenia)

8.**Symptoms, Signs and Ill-Defined Conditions** (Hallucinations, Convulsions, Fever, Fatigue, Rash, Headache, Wheezing, Nausea, Pains, etc.).[91]

A fourteenth category is Supplementary Classification of Factors Influencing Health Status and Contact with Health Services. For hospitalization, this category primarily refers to the after care or chronic care of patients for illnesses and conditions covered in the previous 13 categories. However, hospitalization due to a supplementary classification cannot be connected to the actual condition or illness, and therefore is excluded from the analysis of top reasons for hospitalization.

91 The classification of Symptoms, Signs and Ill-Defined Conditions is used when a diagnosis cannot be clearly made (sometimes there are two possible diagnoses). It is not given a rank and it is placed in the category of "Other", with the other less prevalent conditions.

Because a cancer registry exists, details on the incidence of cancer can be directly documented, as opposed to inferred from hospitalizations, as is the case with respiratory diseases, circulatory diseases, digestive diseases, and injuries. Nonetheless, the actual number of cancer cases in the NWT is small each year, requiring further statistical measures to test significance when compared to national rates.

As with the CCHS survey results used in chapters five and six, further detail on testing for statistical significance can be provided upon request.

Chapter 7

Life expectancy and mortality data come from two sources: Statistics Canada and Department of Health and Social Services.

Age 65 and over is considered a senior in Chapter 7. Mortality is primarily age related, and thus program-specific age cut-offs are not relevant. Furthermore, age 65 is used as a cut-off for becoming a senior nationally for life expectancy and mortality data.

As with the CCH Survey survey results used in Chapters 4 and 5 further detail on testing for statistical significance can be provided upon request.

Chapter 8

The data on health service utilization come from the NWT Department of Health and Social Services, NWT Bureau of Statistics and CIHI.

Age 65 and over is considered a senior in Chapter 8. Hospitalization is primarily age related, and thus program-specific age cut-offs are not relevant. Furthermore, age 65 is used as a cut-off for becoming a senior nationally in utilization data.

There are two factors the reader should be aware of when comparing hospitalization rates between the NWT and Canada.

1. The NWT, due to its regional hospital system and reliance on southern Canadian facilities, tends to have a much larger number of transfers between hospitals than would be the case for majority of Canadian jurisdictions. For example, in some cases, there are patients who are hospitalized in Inuvik and then transferred to Stanton for the same condition, showing up as two hospitalizations (three if they end up in Edmonton).

However, despite the above over-counting, a manual examination of individual records found that approximately 15% of hospitalizations had involved transfers. Nevertheless, there is not currently a way to automatically group the transfers together in order to avoid this double counting.

2. Up to 20% of in-territory hospitalization data for 1999/00 is missing. A number of records were rejected due to system interface problems. Attempts to recover the data are planned for the near

future. With the use of a three-year average, 1997/98 to 1999/00, and the avoidance of detailed analysis, any impact of the missing data has been marginalized.

While the former problem exaggerates the number of NWT residents hospitalized relative to national average, the latter problem somewhat mitigates this exaggeration due to the exclusion of hospitalizations from the analysis in this profile. Moreover, even if such duplication of hospitalizations were removed there would likely still be large differences in hospitalization rates between the NWT and Canada.

Another problem caused by the relatively high number of hospital transfers is to artificially lower the average length of hospital stay in the NWT versus the Canadian average.

Hospitalization by cause has not been examined in this chapter since it was covered in Chapter 6 (Morbidity).

In the section of physician encounters, the reason for physician encounters is examined in general.

As seen in the *NWT Health Services Report*, Supplementary Classifications are very germane to a profile of physician resources. Yet they cover subject matter too varied to break out in any detail given the generality of this profile.

Nevertheless, the following is a list of some of the reasons for health service utilization included under Supplementary Classification of Factors Influencing Health Status and Contact with Health Services. This classification includes three major types relevant to the NWT:

1. When a person who is not necessarily sick encounters the health care system for some specific purpose, such as to receive a vaccination, routine health check-up or examination, or to discuss a problem which is in itself not a disease or injury;

2. When a person with a known or suspected disease or injury, which is current or resolving (healing or mending), encounters the health care system for a specific treatment or investigation related to that disease or injury (i.e., X-ray, laboratory exam, dialysis, chemotherapy, physiotherapy, occupational therapy, cast change); and

3. When a person is recovering from surgery, receiving palliative care, or respite care.

Chapter 9

The data on drugs came from the Extended Health Benefit database, administered by the NWT Department of Health and Social Services.

Age 60 and over is considered a senior in Chapter 9. Sixty is the age of eligibility for the NWT Extended Health Benefit senior program. However, greater age detail is provided, to demonstrate how drug use changes with age.

Drugs have been categorized by the American Hospital Formulary System. This system assigns a six-digit number for each drug, made up of three 2-digit pairs separated by colons. The first two digits pertain to the broad categories, such as central nervous system drugs or cardiovascular drugs. The next two digits reflect subcategories with the larger category and the last two digits refer to even more precise sub-categories. For example, under central nervous system (28), there is a sub-category called sedatives and hypnotics (28:24) and then a further division for barbiturates (28:24:04).

The most often used drugs, by category, and sub-category, are detailed in Chapter 10.

Chapter 10

The data on home care came from monthly home care forms filled out by home care workers across the NWT. Because of inconsistent reporting, client counts and the type of services rendered were estimated. Home visits by nurses operating out of health centres are not included in the home care statistics presented in this chapter. This home visit information is not presented due to information system incompatibility and data overlap with the home care information that is filled out by the home care workers.

Age 65 and over is considered a senior in Chapter 10. Both home care and long-term care utilization are primarily age related. Greater age detail is provided, as these services are used more by older seniors, than younger seniors.

Projections on home care demand for the year 2020 were derived by taking the per capita rate of home care use (monthly client averages divided by the population) and applying it to population projections from the NWT Bureau of Statistics. It is important to remember that the original averages are for one year of home care data. Policy and funding changes will affect demand and cannot be taken into consideration in the development of projections.

Nevertheless, it is expected that home care services will likely proliferate in the future, as they provide a less expensive, as well as more positive means, to care for many people as they age than facility-based care.[92]

Long-term care data came from monthly occupancy reports submitted by long-term care facilities across the NWT.

Facility compliance in sending in occupancy reports is relatively high, requiring much less inference for missing months than was the case with home care.

Departmental long-term care bed projections were developed in a similar means to the home care projections. An average bed day rate by age group is calculated for 1999/00 and 2000/01, and is then applied to population projections from the NWT Bureau of Statistics.

Policy and funding changes, especially in the area of home care, will affect long-term care bed demand. As well, a changing senior population will affect demand. Such future changes cannot be taken into consideration in the development of projections.

92 Marcus J. Hollander, Final Report of the Study on the comparative cost analysis of home care and residential care services, p. ii.

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